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The big Brazilians

**'63 shades of grey**
Tastefully modified Bug

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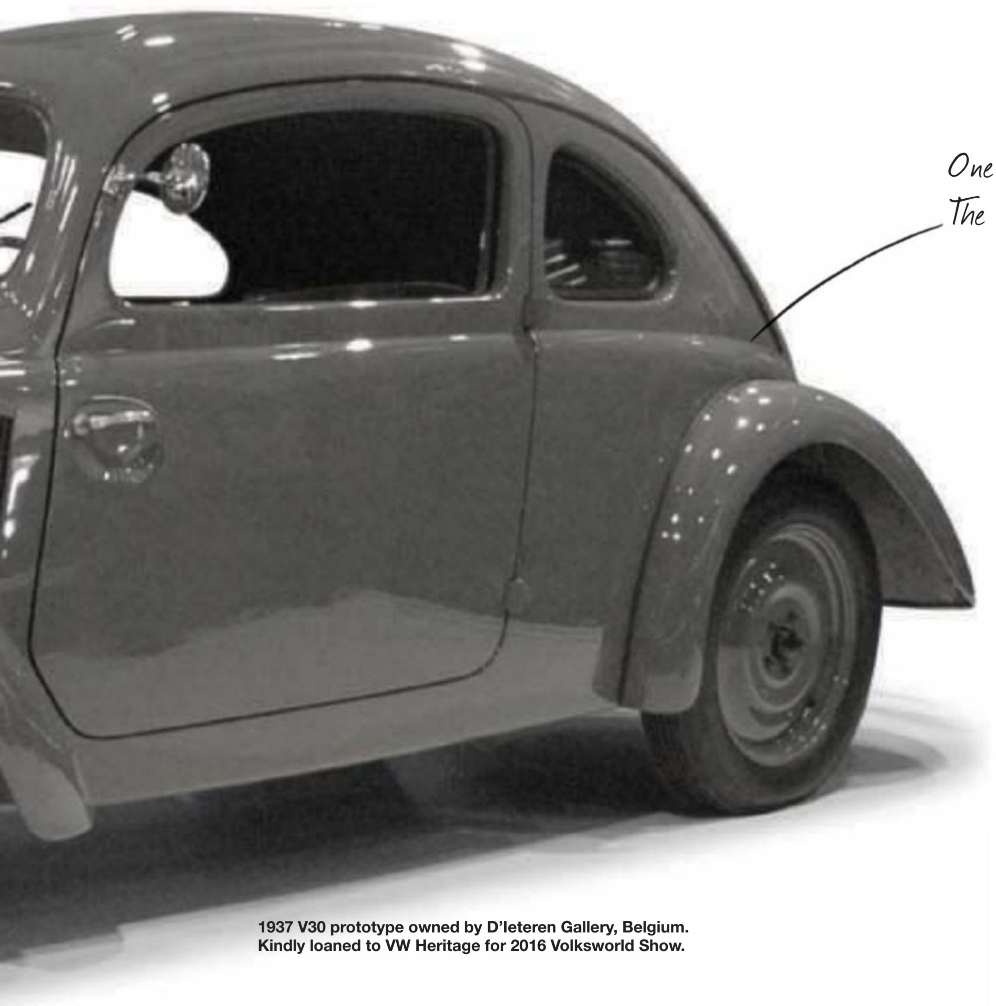

One of two replica V30 prototypes.
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## WELCOME TO THE MAG

The *VolksWorld* Show 2016. What an event. I'm genuinely proud to say I've been a tiny cog in the machinery of the best VW show in the world.

My favourite part of the entire weekend is always the set-up day on the Friday. It's hard work and a very long day for us, but we love watching the cars come in, chewing the fat with their owners, and just seeing the show come together before we open the doors to the masses.

Conversely, as something of a wallflower, the part I hate most is handing out the awards on the Sunday afternoon, with a microphone! Can you imagine someone who hates the sound of the own voice having to hear it booming out across Sandown Park? Simply horrific, I assure you.

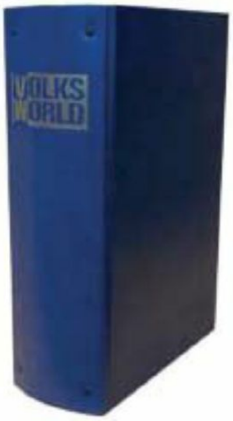
But not as hideous as having people coming up to me afterwards demanding to know why their car / friend's car / club / whatever failed to win a trophy. What the hey?

As a child of the '80s, I grew up in an era before everyone was a winner. If I didn't win a race (and I never did) I didn't get a prize. But nowadays it seems if one child has a birthday, their siblings have to have a present too, or it's not fair. At school, there are prizes for everyone, not just the fastest / most talented, and everyone is a winner. I can only think that's why we have turned into a nation of cry babies, some of whom can't understand why they haven't won something.

If your car didn't win, it's because our independent team of experts awarded it less points than 21 other cars. No other reason than that. And if the only reason to take part is to win a prize, then that's missing the point, isn't it? ■

**James Peene**
**Group editor**

## *VolksWorld* binders



If your magazine collection has attained epic proportions, as all good VW lovers should, then you need some smart binders to keep them in. These were available a number of years ago and now, by popular demand, are finally back. They're the perfect way to keep your precious *VolksWorld* magazines in pristine condition and each holds a year's worth in snug safety. They cost £9.95 each and are available to pre-order now. Simply follow the link below:

www.shop.kelsey.co.uk and click on products, then binders

There's no getting away from it, it looked better in situ! Proof that everything is saveable(-ish)

## Discovered

If you read last month's issue you'll be familiar with Ben Laughton and his penchant for rescuing the unrescuable. Well, he's been at it again…

Originally discovered way back in 2008 in Sweden, some local Bus pervs considered using a helicopter to rescue this Barndoor, stuck miles from the road in the middle of a bog. Then came to their senses. No one thought it saveable, so it was left to rot into the bog. Waiting for Ben…

It was quite the local landmark for walkers, but the landowner liked the idea of a crazy English guy saving it, so he agreed to let Ben have it, if he came and got it.

The main reason for saving this old tub is that it's eight digits newer than Ben's Panel Van, making it the second earliest RHD Bus known in the world. It was also built the same day as his Van, so they left the factory together in January '52 and set sail for Sweden together. How cool? How mad?

The 90-year-old owner of this Bus parked it there in 1964 for the land owner's father to shelter in when cray fishing. It had sat for a while…

Features editor, Mike Pye, says it how he sees it

# No compromise

## It's your vision, and you that has to live with it

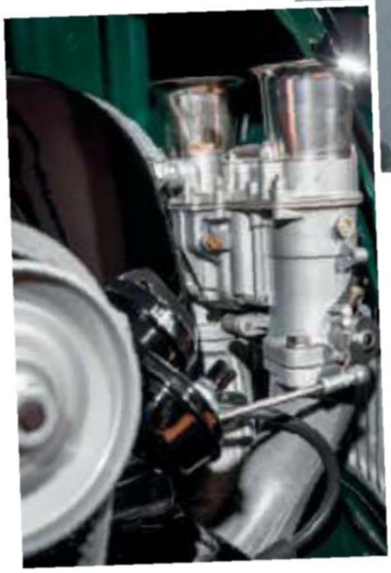
Elsewhere in this issue you'll find the feature on my Oval, in which I attempt to explain how the car is no longer fit for purpose. My purpose that is. It's taken me a long time to accept it, but I'm at peace with that realisation now. The important thing to me is I haven't compromised my vision for the car.

All cars are a compromise of some kind or other, whether it's a modern Golf GTi that is heavier than it should be due to having to comply to some European-wide NCAP safety rating, or the latest generation Nissan Skyline that isn't as raw as its predecessors due to the customers' desire for ever lower noise, vibration and harshness levels. But when it comes to modified cars, such compromises multiply enormously. We're all guilty of it, to some degree or other. The obvious one to me – because I've done exactly this – is an engine too highly modified for regular use. Such cars end up relegated to, at best, occasional weekend playthings, at worst, even more occasional track / drag strip use that consumes more money per mile than they did in a year of daily use when stock. I'm the first to admit I put 48IDAs on my car because I was cajoled into believing it was the thing to do. And I don't regret it. Nothing, bar nothing, looks as good on a Type 1 engine when you open the decklid, but several things perform better if you want to drive your car on the street. Fuel injection is better. 45 Dell'Ortos are better (and flow more than 48s choked down with 37mm venturis), they just don't offer the same kudos.

> "We're all guilty of it, to some degree or other"

Yet, despite understanding my own failings, I would do it all again in a flash. Twice now I've picked up quad IDA manifolds at swapmeets and seriously considered using four of the suckers on the small block Chevy I have waiting in the wings to go into one of my other projects. Madness, I know, but a route I've almost persuaded myself to go down, based purely on the fact that I love the look of them and thought it would be kinda cool to have two cars with IDA induction. Or, to put it another way, two cars I don't use.

It took a huge reserve of willpower to walk away from this ready to go small block Chevy set up. That and a lack of £1,800 in my trousers



I love my IDAs, but I loved driving my Oval a lot more when it didn't have them

Sure, you don't get the same buzz from a Volkswagen with a single weedy Solex, but you do get a lot more use. Or at least I did out of mine, and judging by how infrequently I see all the other IDA-equipped street cars I know of in this country, or the number that arrive and depart The *VolksWorld* Show on trailers (including myself), I'm not alone.

It's not just lairy engines. Close ratio gearbox? Great if you want to shave a couple of tenths off your quarter mile time, but not the answer if you want to enjoy driving your car to the track to do the shaving. Solid-mounted engine and gearbox? It might reduce wheel hop, but you'll soon come to hate it on the street, other than the occasional show.

### Straight cut 'box

Leaving Wheels Day this year and hearing one coming from a mile away, I was reminded of the lad we used to work with who saved up for years for a Jack Knight straight cut 'box for his race-inspired but street-driven Mini. It sounded awesome. The thrill soon wore off, though, and put paid to the car ever being driven on the street again.

There's a famous saying that racing improves the breed, and I don't dispute that, but in my experience unless you have the means to go all out, and not at the expense of your road car, it's better to let others do the racing, and enjoy watching them do it. If a few of the modifications filter down to useable upgrades for a road car then, indeed, racing has improved the breed. Turbos are a prime example. Once the preserve of flame-spitting Group B rally cars and other such exotica, they're now commonplace on mundane daily drivers. Hell, you can buy a Skoda factory fitted with a turbo *and* a supercharger, and it's quicker, more reliable, more fuel efficient and, well, better, than just about any V8-powered street car with a chuffin' great blower on the top, and you can use it every day without a care in the world. Would I buy one? No chance. Would I put a 6-71 on my small block and make the car it's going in a bear to live with? Absolutely. My reasoning being entirely consistent with my thinking on tyres.

Speaking with Gazz Priest for the feature on his 1303 Beetle, also in this issue, made me feel almost sensible about my dogmatic approach to modifications. Here is a man with far more knowledge and ability with spanners than I could ever hope to amass, battling his way down a lesser trodden path, purely because people have told him he shouldn't go that way. I admire him for that, and I am in awe of what he has done in a small, single-car garage at his parent's home to bring that no-compromise vision to reality. He's the first to admit he's a way to go yet to make his unconventional drivetrain combination fit for *his* purpose, but without people like Gazz trying what everyone has told him can't be done, no discoveries would ever be made. ■

**What do you think?**

Do you agree with the ex-ginger Oracle, or do you think he's talking twaddle? Join the debate by emailing us at volksworld.ed@kelsey.co.uk

Tough looking Cal Look Oval found itself amongst some fantastic company

This is the famous Red Room that makes up just part of the impressive Haynes collection. There really is something for everyone here

'67 Cal Looker rocking EMPI 5s and aftermarket ragtop roof section

How to make brown and beige cool, route one - stripes! We've always been a big fan of this Bus

# Vee Dub Family

## *A grand day out at the Haynes Motor Museum*

**Words and photos** Chloe Adams

What is Vee Dub Family? We're an online facebook page whose members share a passion for Volkswagens. You don't need to be an owner to join, everyone is welcome.

Why did we have such an awesome turnout at our November meet? That's easy, it's all down to the Family members. Without great members we wouldn't have anything. Securing a good venue helps, of course, and a central location is key.

The Family was started online, in the Bristol area, over a year ago, so it seemed right to find somewhere local that the original members could have a good convoy to. But we also wanted it to be somewhere newer members outside of Bristol would want to convoy down to as well.

> "If anyone arrived as a visitor, they left as part of the Vee Dub Family

I live in Weymouth In Dorset and have visited the Haynes Motor Museum a few times, but knew it had recently undergone a major refurb, so thought it would make the perfect venue. It did.

We were given the whole race circuit to park on, and had agreed a special price for entry to the museum for all members prior to arrival, so all was looking good. We just had no idea how many people might turn up.

When the cold November Sunday arrived for the day of the meet, a few of us left sunny Dorset in the early hours so we could arrive by 10am in good time for the arranged 11am start.

We arrived, parked up, set up signs for everyone else to follow and positioned ourselves on the gates to direct traffic. Let's just say if anyone arrived as a day visitor to the museum in a Volkswagen, they left part of the Vee Dub Family. We had photos taken on arrival of everyone who came to the meet so they could remember the day, and had a video made so the workers could enjoy any rides they missed.

When everyone had arrived, we took the opportunity to sell raffle tickets in aid of a fellow Family member who recently died called Adam Gordon Mitchell, and donated the £114.75 raised to the British Kidney Patient Association. Prizes included Vee Dub Family merchandise, stickers and one of my Snap-On spanner bracelets that I donated as the top prize.

Check out Vee Dub Family on facebook and, if you haven't been, treat yourself to a visit to the Haynes Motor Museum (www.haynesmotormuseum.com). It's a great day out. ■

# EVENTS AND CLUBS

Let us know about your VW event or club – email volksworld.ed@kelsey.co.uk

Everything's becoming smaller these days, from 'phones to cars…

ATS wheels and Cibie spotlight covers are nice additions to this otherwise stock 1303 Cabriolet

Gary Belcher's Jag V12-powered Model T has been on display at the Haynes Museum forever

Black detailing, nose-in-the-weeds stance and a cheeky rollcage, something tells us this Cal Look ragtop means business

The historic race car display has some very tasty cars, including this 1973 Porsche 911 RS

VW family parking only. And all for a splendid cause, too

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**VolksWorld Magazine**, Kelsey Media, Cudham Tithe Barn
Berrys Hill, Cudham, Kent, TN16 3AG

**EDITORIAL**
**Group Editor:** James Peene
Tel: 01959 543538
**Email:**
volksworld.ed@kelsey.co.uk
**Group Art Editor:**
Steve Gosling
**Group Sub Editor:** Mike Pye
**Contributors**: Ivan McCutcheon, Richard Gunn, Mark Walker, Cathal O'Toole, Mike Birch, Dan Pullen, Thru-a-lupe Photographic, Michael Whitestone

**ADVERTISEMENT SALES**
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**Commercial Manager:**
Catherine Rowe
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**Production Supervisor:**
Kylie Woolgar
01733 353396
kylie.woolgar@kelsey.co.uk
**Production Manager:**
Jackie Aubrey
jackie.aubrey@kelsey.co.uk

**MANAGEMENT**
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# PRODUCTS

Selling a new product? email volksworld.ed@kelsey.co.uk

## 12V semaphores

**From: www.vwheritage.com**
**Price: £91.16 (sale price)**

If you're lucky enough to own an early (pre-'61) VW, then you'll have semaphore indicators (otherwise known as trafficators). Over time, these can become lazy and, if you're going to upgrade from six to 12V electrics, these little beauties from VW Heritage are just the ticket. At the time of going to press, they were on offer, too

## Carb rebuild kit

**From: www.justkampers.com Price: £13.50**

Got a dirty or leaky carb in need of some love? This comprehensive rebuild kit is what you need. It's suitable for 28 / 30 / 31 / 34 PICT carburettors, as fitted to 1200cc-1600cc air-cooled engines, and contains everything you need to breathe new life into yours

## Short IDA stacks

**From: www.webcon.co.uk Price: £30 each**

If you are using Weber 48IDA carburettors on your VW, especially in an early car, chances are you will run into clearance issues with the decklid when using the standard 56mm air horns, or ram pipes.

Webcon's new reduced height air horn is just 33mm high, so could prove the perfect solution. Unfortunately, you can't just use one, you'll need to buy four to keep your carbs in balance, and the auxiliary venturi height also needs to be reduced to suit, so it's not a cheap solution, but it is a good one.

The new Webcon 33mm 48IDA air horn is part no. 5284051200

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PICK UP

## Brand new Fumagallis

**From: www.justkampers.com Price: £99.50 each**

That's right, for the first time since the 1970s, you can get your hands on a brand new set of Fumagalli wheels, fresh off the original production line.

The all-new Fumagalli wheels were a massive draw to JK's stand at The *VolksWorld* Show, and are a cool opportunity for JK to bring something back to the VW scene.

These are not repros, but factory-produced wheels, from the same place that made them originally. They are available in three widths - 4.5, 5.5 and 6J, so will suit all air-cooled applications, and come finished in a silver grey powder coat finish.

The rest of the initial production run is currently on its way to Just Kampers' Hampshire HQ, and will be available online soon.

It's not often a 'new' wheel comes along for air-cooled VWs, so we expect to see a lot of these making their way onto cars soon

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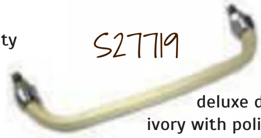

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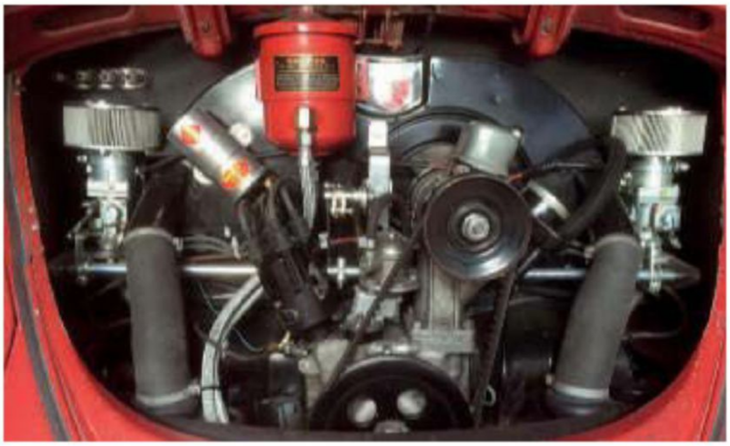
# Letter of the month



## Riechert twin carb kit

### *Chris Grocott, via email*

My car is a 1965 Beetle with its original 1200, 40bhp, single-port engine. With its great history and low mileage, I chose to do just a sympathetic restoration and was keen to restrict any improvements to accessories that an enthusiastic owner could have got hold of back in the day.

I originally bought a Judson supercharger, but sold it before fitting it as I'd started to read about the many twin carburettor kits available in the mid-'60s, including Okrasa, Theo Decker, Express, Vanguard etc. I then read about the bolt-on kits developed by Bernd Riechert in Germany in the 1960s that are still offered by him today. I emailed the company and got a response from Bernd himself, who forwarded the options and price list. We spoke a couple of times and agreed what specification was best for my car. I placed my order in early November, but unfortunately Bernd was taken ill at the same time and spent the next two months away from work and all communication stopped.

Riechert Tuning does not accept Visa or PayPal payments so, after Bernd got back in touch in mid-January, he sent a hand-written invoice. I then made a bank transfer, waited for the funds to clear and the parcel then took a week to arrive.

The kit for the 1200 single port includes cast aluminium manifolds, linkage, stainless steel air filters and gaskets. It costs £315, or £750 if two refurbished Solex 28PCI carburettors are added. Other kits are available for 30bhp 1200s and 1300s, as well as bigger single or dual-port heads. Bernd even has some NOS Solex carburettors in stock.

Fitting the kit was straightforward as the components are top quality and everything is included, although the photocopied instructions are in German. The only anxious moment for me was removing the original manifold studs from the heads as they need to be replaced with the longer versions provided.

Riechert provides knurled brass 'wheels' to replace the standard mixture screws that are otherwise impossible to reach. Access to the forward manifold and carburettor nuts and the spark plugs is restricted, to say the least, so a set of Hooky's HiPacs are on the cards for future maintenance.

Once fitted, the engine started straight away and ticked over, but acceleration was lumpy as the timing, mixture and carburettor balance set by me were only approximate and done by ear. A local specialist, Alan Fielding at CarbCare in Lichfield, Staffs (www.carb-care.co.uk), got these spot on for me and the engine now runs and starts well, offering a noticeable improvement in acceleration over the original single carburettor set up.

The kit adds around 6hp so, whilst I won't be checking quarter mile times yet, it sounds and looks great and period correct. Early Riechert kits occasionally come up for sale at a premium price, but when new ones are available that are exactly the same, just without the years of wear, it seems a bit pointless to buy one. I am pleased with my purchase.

## Shedding more light

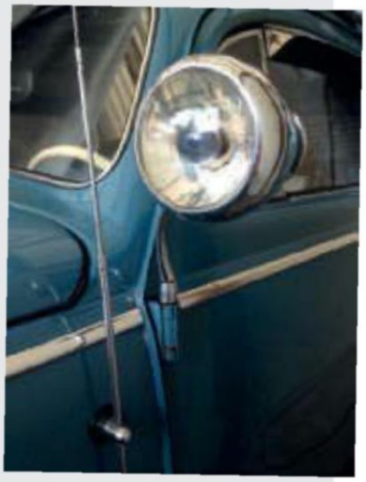
### *Stuart, Germany*

Hi James, with regards to where to put a searchlight. The searchlight I have is from the firm Marchell. It came with the mounting frame for fixing to the front side panel but, not wanting to bolt it on the panel, I took the mirror (broken) of the driver's side, threaded the stem and then simply wound the lamp onto the stem. Truthfully, the mirror on the back of the lamp is about as much use as a chocolate fireguard. The bulb is blacked out on the front to throw more light onto the reflector, thus projecting the beam further. It's not wired up as it's just for show.

My car is a '62 ragtop. See you in Hanover? I'm the one with Santa on the sledge and original one-wheel Calberlah trailer.

*Grüß aus Deutschland,*

***Who'd have thought we'd have got quite so many column inches out of one spotlight query? Thanks for sharing, Stuart. – JP***



## Illuminating times

### *Robert Richmond-Jones, Dorset*

Hello James and all at *VolksWorld*. Having read the recent letter about the mystery spotlight, I thought I could shed some further light on the matter. I happened to have a copy of *The Motor* from October 1959 and it contained an advertisment for the STYLA pillar-mounted spotlight, albeit with a gun pistol grip. I thought the person who wrote in about their spotlight might be interested to see it.

***Many thanks Robert, but how on earth did you remember an advert from a magazine printed in 1959? – JP***

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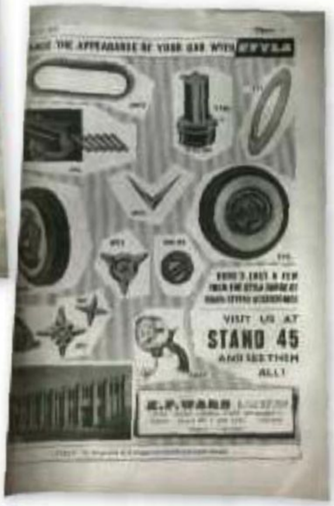
Herald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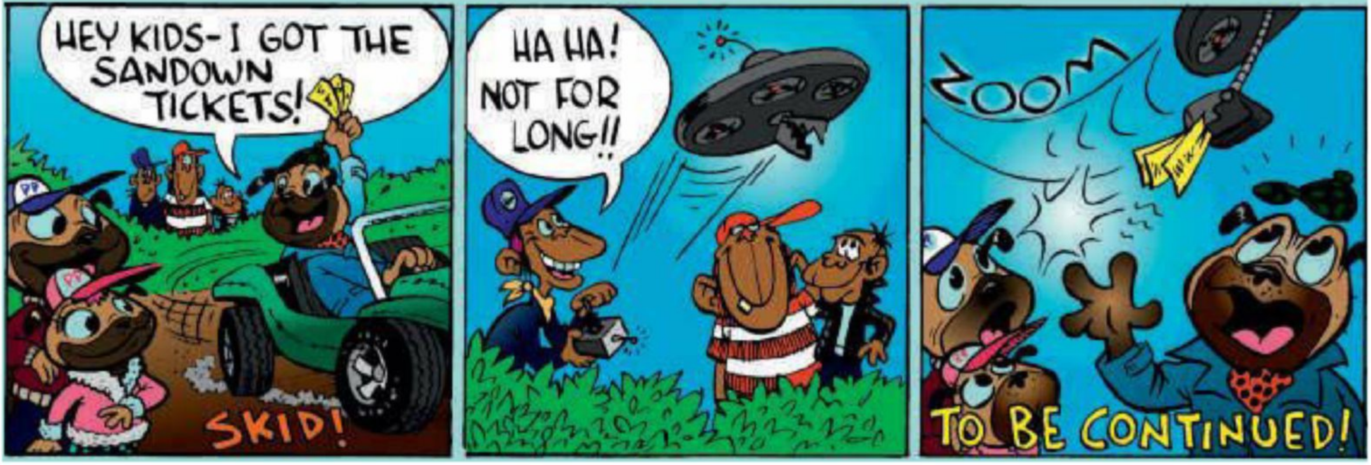
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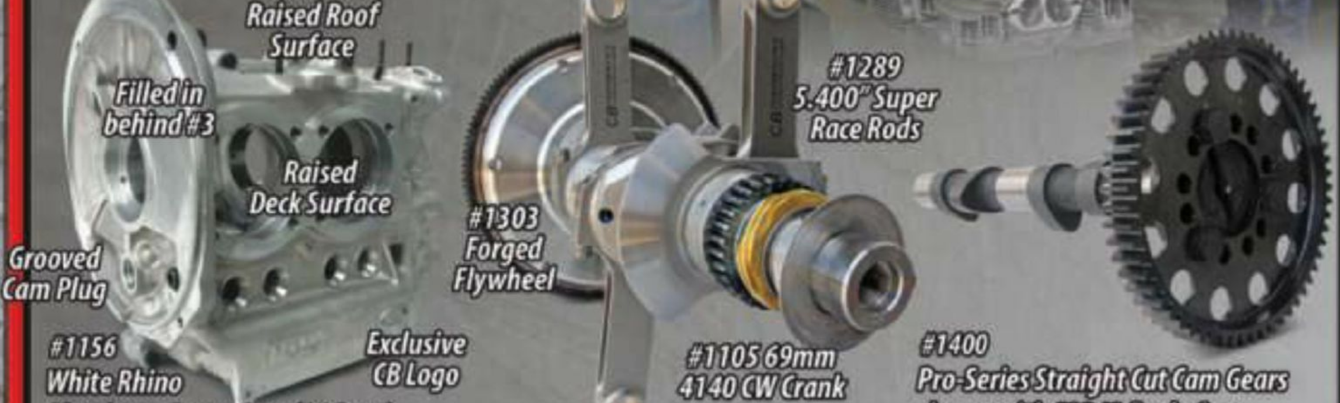
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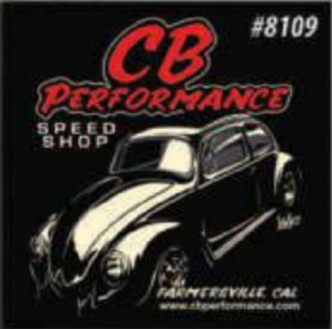
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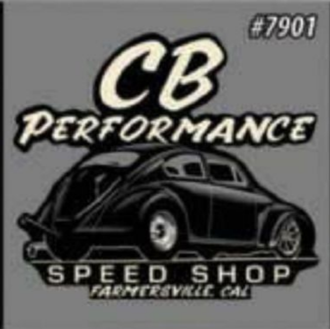
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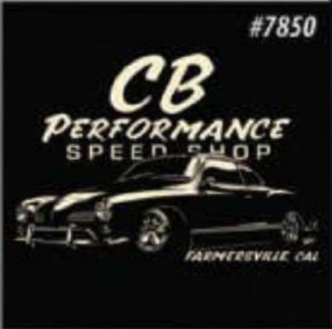
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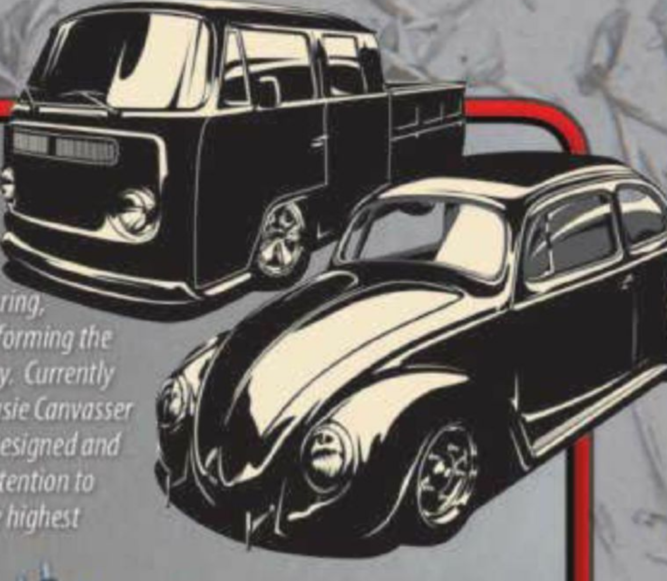

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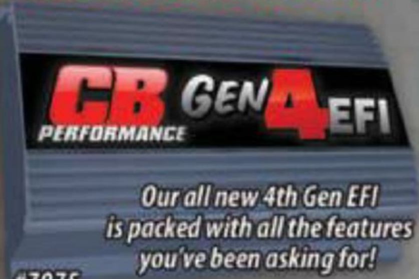

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# Car of the month

^ The Nikki carb and that sports steering wheel suggest Paul might have been 'a bit of a boy' in his day!

< The kind of car we all dream of finding. Did you spot the alloy running boards?

## Paul Bacon, 1973 1300

Paul is a member of the Leicestershire and Warwickshire Volkswagen Owners' Club, and bought his 1973 Beetle brand new when he was 26-years old. Now 69, both Paul and the car are in remarkably well preserved condition! Paul remembers fondly his father asking him when he bought the Beetle, "What do you want to buy that blooming thing for?" To which he replied, "Well, I don't know dad, maybe it's because I like 'em. I've always liked 'em and, 43 years later, I still like 'em!" The car was purchased from Foleshill Garage in Coventry for £1,060, with a trade-in on Paul's old Ford Cortina.

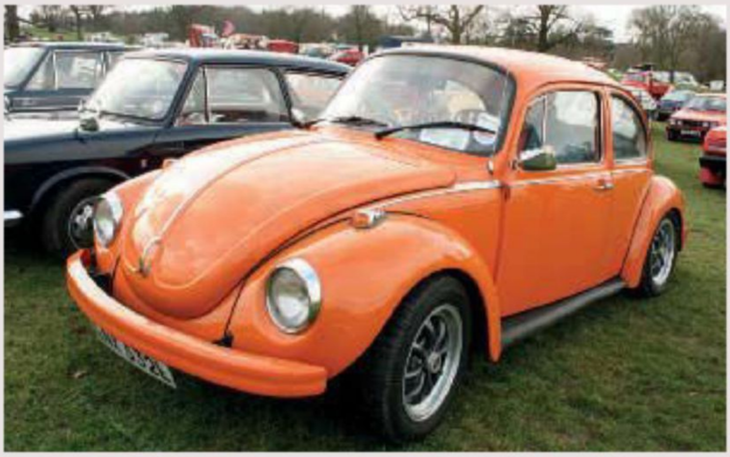
> "I fitted the additional oil cooler as I like to go fast!

Having clocked up just 90,000 miles since, the Beetle remains in great condition and remarkably original, right down to the original clutch! Better than that, it has never seen a welding torch and the majority of the Kasan Red paintwork is original. Paul has touched up the wings in places using a genuine '70's VW touch-up stick, that comes with a brush applicator!

A few modifications and upgrades have been made over the years. In 1975, an aftermarket Nikki carburettor was fitted, along with a Bosch 009 distributor and a VW sports steering wheel, and all are still going strong today. More recently, in 2014 and '15, a 24-row oil cooler was added, plus additional oil temperature and pressure gauges, and a set of alloy valve covers. "I fitted the additional oil cooler as I like to go fast," grins Paul. "When I was cruising at 70mph, the temperature gauge showed the oil was getting get quite hot, but fitting the extra cooler has brought the temperature down quite a bit."

When asked how come the mileage was so low, Paul came clean: "The Beetle was my daily driver for 17 years, but then I stored it in my garage for 20 years. I then moved house and the Beetle sat outside in a field for four years, which wasn't ideal, but it's kept in a garage where it belongs now."

v A genuine one-owner car, still with the person that bought it new. How cool?



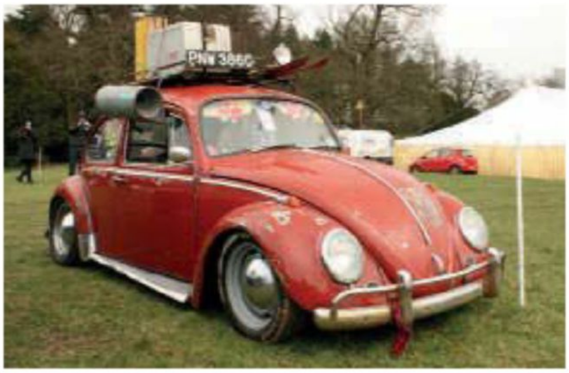
## Mike Stanley, 1972 1303

Mike's 1303 is the first Volkswagen he has owned, having bought it 15 months ago. "We've owned other older classic cars in the past, the last being a 1946 Humber Hawk," explains Mike. "The Hawk was a nice car, but very heavy to drive, so I wanted something lighter and something I could buy replacement parts for fairly cheaply and easily – something we certainly couldn't do for the Humber! I spotted this Beetle for sale on eBay, up near Crewe in Cheshire. I had a good chat with the vendor on the telephone, agreed a price, then took the train up to Crewe, did the deal and drove the car back to our home in the Midlands."

Mike says he is still getting used to the Beetle, and knows very little of its past history, other than the suspension has been lowered – something he plans to return to stock in the future. The interior is stock and in very good condition, but the exterior has been repainted in bright orange, with the bumpers taken in as well. The car sits on reproduction EMPI 8-spoke alloys. "We're very pleased with the Beetle. It's an impressive little car that's so easy to drive, and the engine starts on the button every time," enthuses Mike. "All that remains now is to join our local Volkswagen club and to continue enjoying attending car shows and enjoying the classic car way of life."

< If Mike plans to return the car to stock height, we suspect the previous owner's stickers will soon be for the bin, too!

^ Being a 1303, not a 1303S, this will be a 1300 twin-port engine. Not VW's finest hour, but a solid mid-range performer



## Alan Wootton, 1965 1200

Some enthusiasts will go to extreme lengths in order to pursue their interest in owning a classic Volkswagen, and in Alan Wootton's case that meant selling his brand new Fiat 500 in order to finance the purchase of his! Three years ago Alan, who is a member of the Staffordshire Classic Car Club, bought this Beetle already sporting its current look, so hasn't had to spend hardly a penny on it since. The previous owner, who was a friend, fitted the narrowed front beam, widened steel wheels and lowered the suspension all round to give the car its look. Alan has since added the swamp cooler, and we're not entirely sure who put all the trinkets on the roofrack.

While the car suits Alan's requirements very well, he says he can't help but think about implementing a few changes in the near future. "I think fitting air ride suspension will be next, which will almost certainly be followed by a bigger engine," he enthuses. "The present 1200cc engine is okay but it's getting rather tired now and the car's a little slow going up hills." [Try taking all the aerodynamic hindrances off first Alan, and see if that improves things! - Mike Pye].

"I'd like to go for something a bit fancier and definitely more powerful, so a 1641cc engine with twin carburettors beckons. I may possibly upgrade the braking system too, though right now the all-round drums work really well."

< Never mind the bigger engine Alan, block those holes in the tinware and sort the engine bay seals first or there'll be trouble at t'mill

v Car rolls on widened 356-style steels and low pros

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# 2016 DATES ANNOUNCED July 29-31

The VW *Camper& Bus* Show has established itself as a must-do event for thousands of VW lovers. This family-friendly festival, with VWs as its stars, takes place this year over the weekend of 29-31 July at the historic Eastnor Castle in Herefordshire, arguably the most picturesque location on the show calendar. So come one, come all, everybody is welcome. We're sure there will be something to entertain everyone. Advance tickets can be purchased now at discounted prices at www.vwcamperandbus.com

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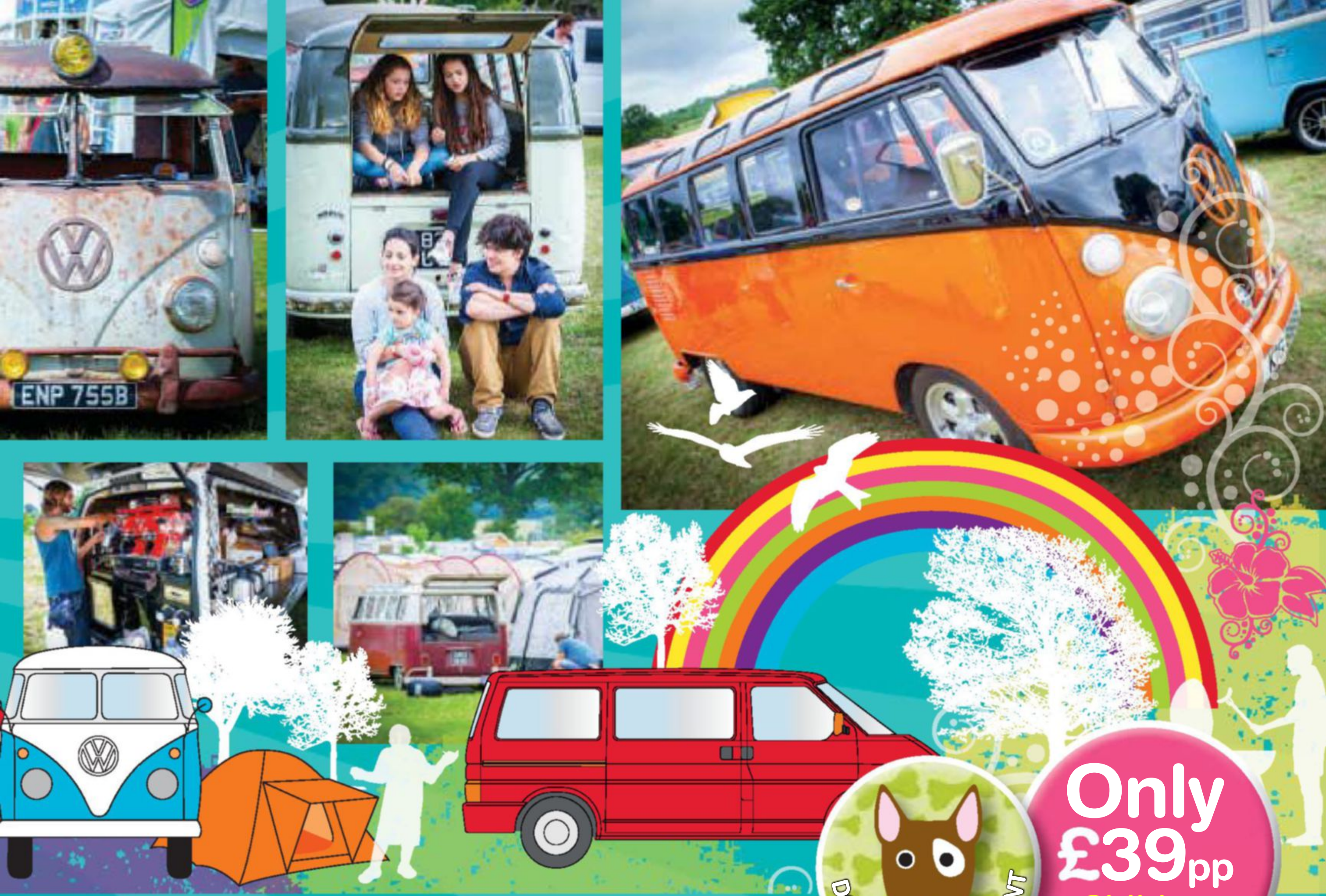

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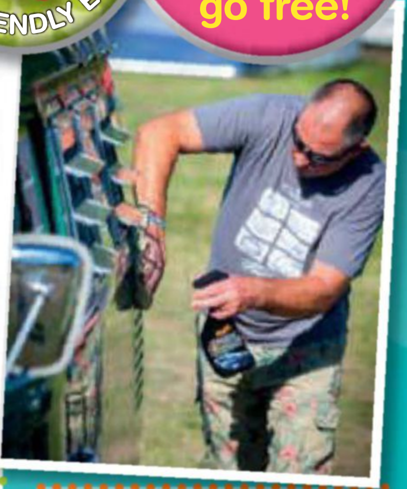

## *Everybody welcome, including the dog!*

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Van Man leads the fun in the kids' zone, organising soft play and arts and crafts, while in the main arena there will be a variety of activities, some to just sit and enjoy, others to participate in. Plus there will be trade stands and a swapmeet, both great places to pick up a bargain, or that hard-to-

## *T4-T6 Transporters*

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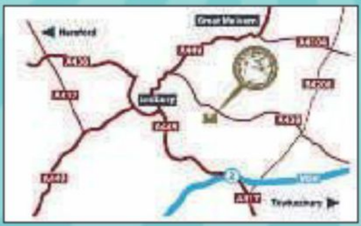

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Campers: open from 13.00 on Friday 29 July 2016, closes 19.00 on Sunday 31 July 2016

Day ticket holders: 09.30-19.30 (Saturday), 09.30-17.00 (Sunday)

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We're lining up the perfect mix of music to soundtrack your weekend. We're not talking banging Euro techno or hardcore dubstep, but a great selection that is guaranteed to get everyone up on their feet. Keep checking the website for updates to find out what we have lined up for you

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### Rear Silencer - Monza 4 Tip
**252VG0130**

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For Beetles and Karmann Ghia 1300cc, 1500cc, 1600cc up to 1973. Vans 1500cc, 1600cc to 1971. Will require **286VG0010** to complete.

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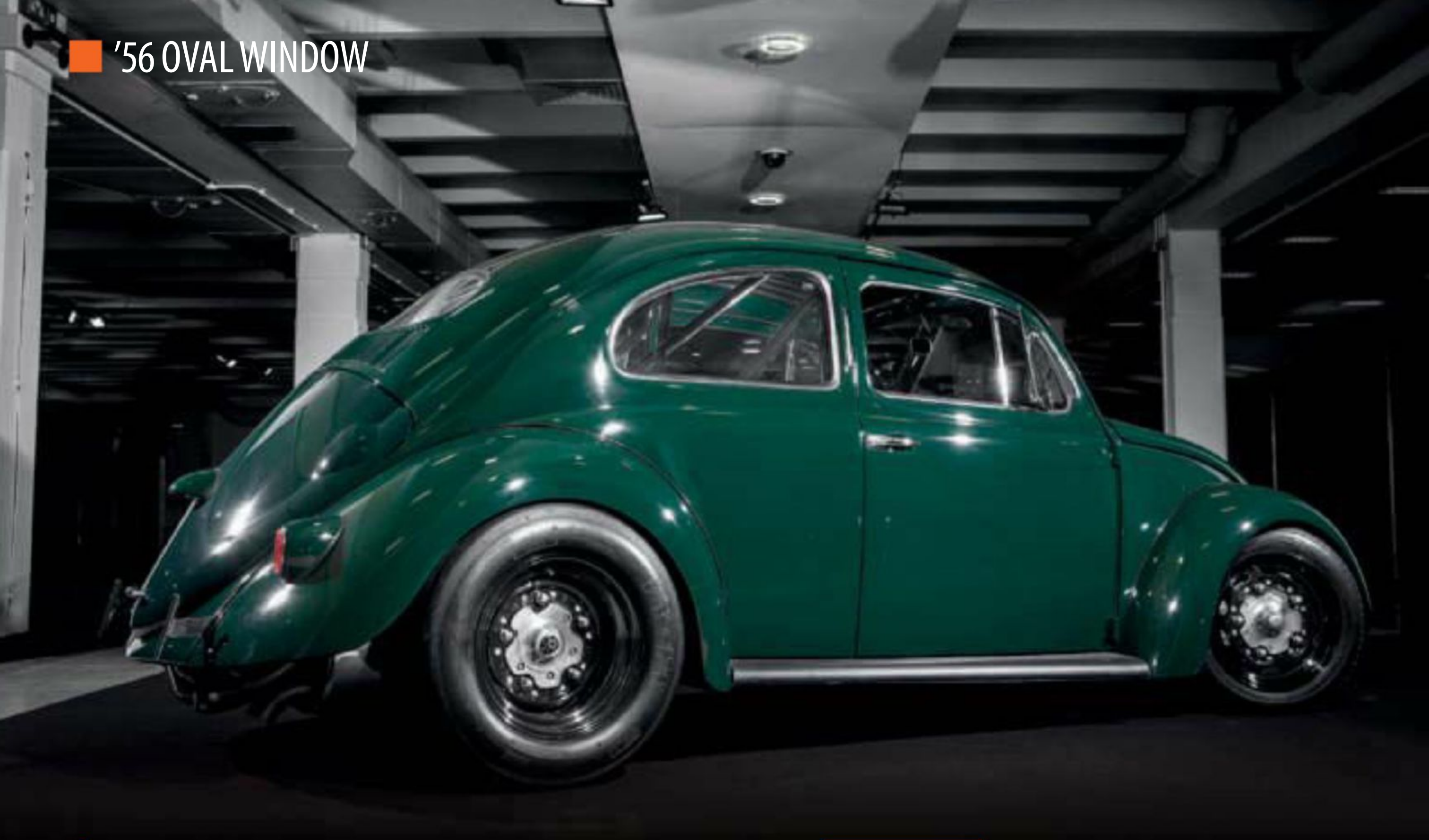
# The Pye 'Wagen

## It's 20 years this year since I bought my dream car. So why has it spent the last 19 years off the road?

**Words** Mike Pye **Photos** thru-a-lupe photographic

It's just an Oval thing. Ever since clapping eyes on Chris Jory's car in the third ever issue of *VolksWorld* I have been smitten. There's something about the way the swage line runs along the side, swoops around the shapely decklid and continues back along the other side. The rear window, pope's nose, rear lights, dashboard, it all just works for me.

So when I started on *VolksWorld* in 1995 I made it my mission to own one. Back then I was concerned about parts availability, six volts, reliability, all that boring stuff, but I was convinced – easily – and so started looking for one earnestly. I eventually bought a Polar Silver Blue sunroof '56 from a good friend, but it wasn't the right car for me, so when in September 1996 Jonas Uhland offered me a similar vintage Jungle Green car that was being sold by a Swedish VW collector, I made it happen. The road trip to collect the car from Pålsboda was, if I'm honest, about the most fun I've ever had with this car. Bengt Holmgren had an unbelievable collection that we were given a private tour of, the nights out in Stockholm with Jonas and the drive home in my new car, it was all a blast.



Wheels and tyres are my thing, so I tried many options before settling on this combination. Front wheels are 4.5J 356 steels with 135 Michelin ZXs, rears are 7J with 235/60 M&H Racemasters, putting 18 inches of rubber to the floor

The car cost me 22,000 Swedish krona, approximately £2,200 at the time, and it didn't need anything. In hindsight, the biggest mistake I made was, a year of daily driving later, taking the engine out. I ignored the advice of those older and wiser than me because I had a plan, and was young enough and dumb enough to think I could see it through on the limited budget I had to play with.

Inspired by the cars I'd seen on display at The *VolksWorld* Show, I was going to do a mega detailed floorpan with shiny inner 'arches and leave the rest of the body as was. It required minimal repair welding and, like so many Swedish imports, had been given an external repaint at some point that was certainly good enough to live with. Without the cost of a paint job, it would be a quick, cheap-ish job, right? How wrong I was.

Despite only having a power-less lock up to work in, I split the body and 'pan, then had the latter media blasted at Cleaning Consultants, before calling on another friend, Tim Carter, to do the small welding jobs I was at the time unable to do, before Carl Parker at Panel Craft in Purley sprayed it gloss black, with an intermediate coat of stone chip on the underside. This was 2000, and it was still going to be a daily driver at this point.

> "I was going to do a mega-detailed 'pan and leave the body as was"

## Losing the plot

Then, to cut a long story short, things went a bit awry in my life, culminating in me disappearing off to South America for the best part of a year – not so much to find myself, as to lose myself. While cars were far from top of my list of priorities, the diaries I kept while I was away contain numerous sketches and ideas for little details I could incorporate. The key word is detail. I have put ludicrous amounts of time and thought into the minutiae of this car. Ideas for colour never changed, the interior – which I did myself and cost about £75 all in – was done about 15 years ago and I'm still quite happy with it now. But intricacies like dash switches, the treatment of the engine, the wheels, the perforated ali sheet used behind the speaker grille and the horn grilles, the polished louvred ali carb inspection panels… stuff like that consumed my thoughts like a disease.

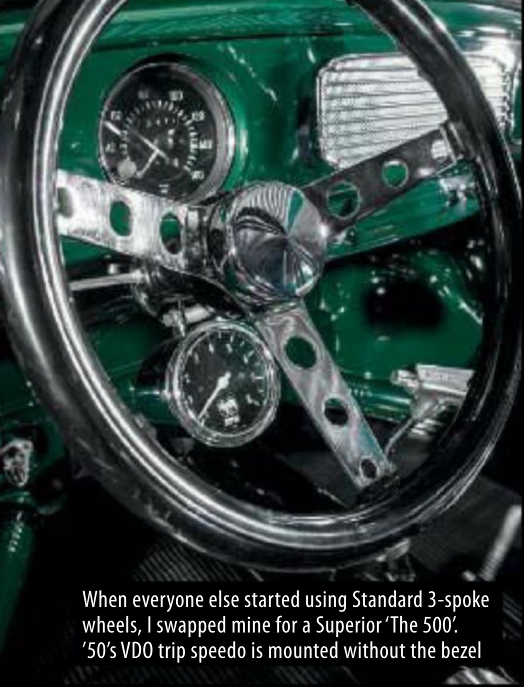
### TECH INFO

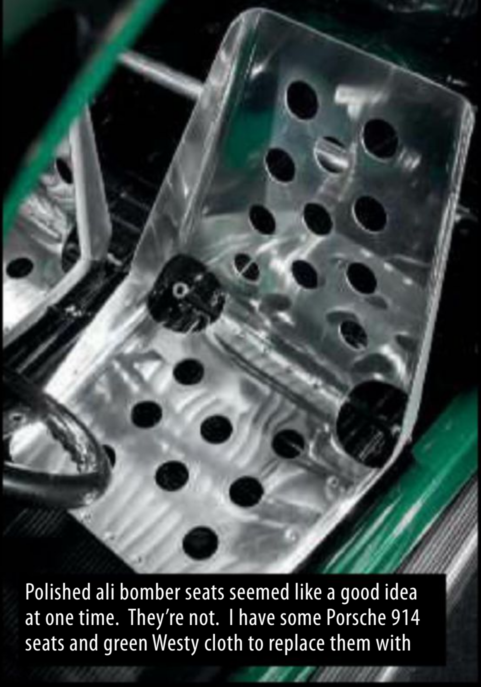
**SUSPENSION:** JT aluminium front beam with adjusters added; beam strengtheners; steering damper; chromed anti-roll bar; chromed camber compensator; CSP disc brakes all round

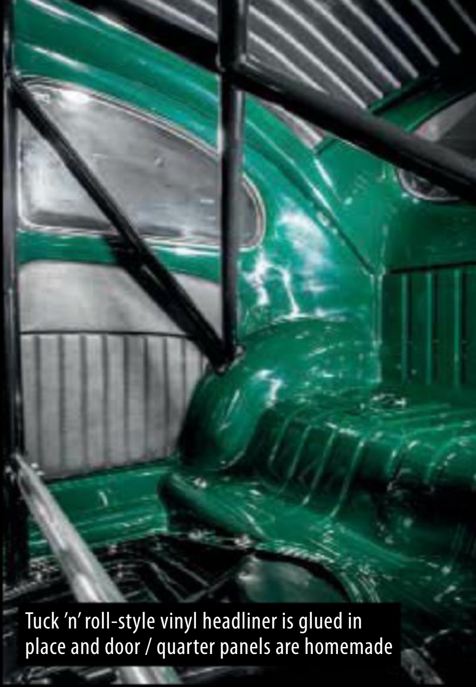
**GEARBOX:** Rebuilt by Peter Englezos at Cogbox; powder coated case modified for late clutch release; NOS Type 2 nose cone / hockey stick; Super Beetle mainshaft; 3.78 modified Type 2 first gear, 2.06, 1.26, 0.82 gears; 4.125 ring and pinion; Crown Super Diff; Gene Berg axles, side cover savers and intermediate mount

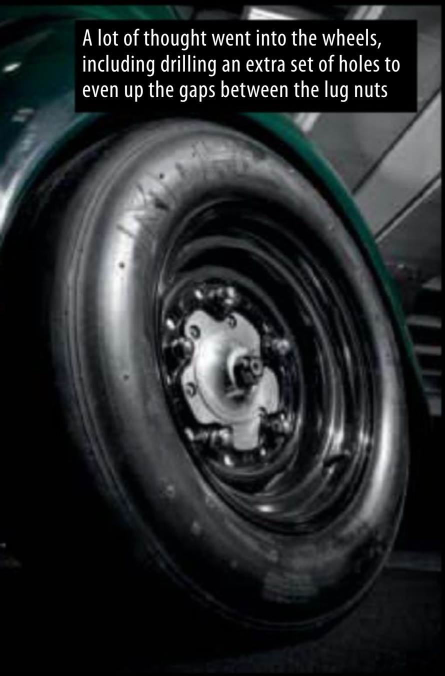
## The Rhoad to ruin

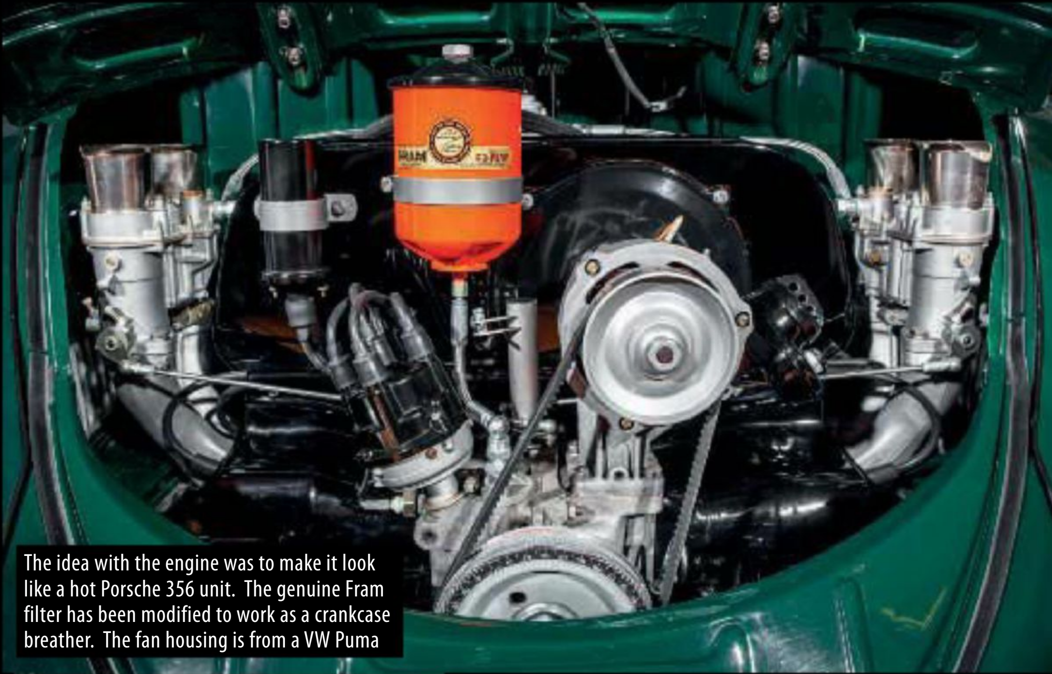
As far as influences go, Dave Rhoads' '64 had a massive impact on me when it was brought over for Beetle Bash in 1996. I'd seen pictures of the car in Keith Seume's Cal Look 'bible', but nothing prepared me for just how tough it looked in the metal. The six-inch slicks on genuine BRMs sat bolt upright, filled out the rear 'arches and, to my mind, just looked right on. The absence of chrome emphasised the Beetle's natural curves and the simple, no-nonsense interior was all the car needed. Dave graciously took me out for a drive in the car and that made my weekend. My car isn't a clone of Dave's, and I don't even really see it as Cal Look *per se*, but it definitely takes the less is more element I love of that look, combined with a little bit of hot rod in the interior treatment and the extreme big 'n' little tyres, and even a touch of stock car in the widened steels. On the wheels, some people have commented


When everyone else started using Standard 3-spoke wheels, I swapped mine for a Superior 'The 500'. '50's VDO trip speedo is mounted without the bezel


Polished ali bomber seats seemed like a good idea at one time. They're not. I have some Porsche 914 seats and green Westy cloth to replace them with

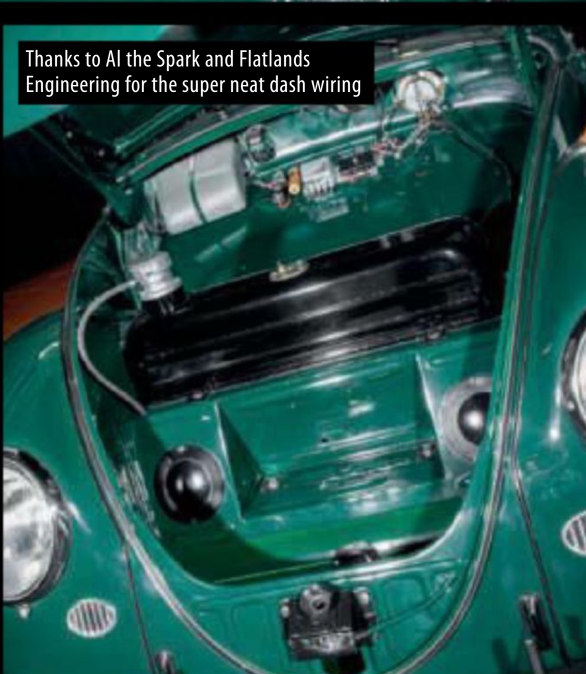

Tuck 'n' roll-style vinyl headliner is glued in place and door / quarter panels are homemade


A lot of thought went into the wheels, including drilling an extra set of holes to even up the gaps between the lug nuts


The idea with the engine was to make it look like a hot Porsche 356 unit. The genuine Fram filter has been modified to work as a crankcase breather. The fan housing is from a VW Puma

Single teardrop bulge in the decklid was the neatest way I could think of to clear the front right ram pipe

Mirror polished 'pan and hand polished stainless bolts. Non-car people don't understand stuff like this


Thanks to Al the Spark and Flatlands Engineering for the super neat dash wiring

I wanted the car de-chromed but didn't want it to look like an '80's UK Looker, so the small amount of chrome highlights were carefully considered

that the car needs rims, and perhaps they're right, but I've seen it with Cragar S/S, polished Mitchells, Crestlines, satin Center Line Convo Pros and I still think the subtly detailed black steels set the overall look off the best. I'd actually like to try it with wider tyres – 185/55s – on the front on offset adjusted 5.5J steels, but that would mean a new, narrowed, steel beam, and I don't want to go down that route. I like to see my wheels and tyres, and I like my 'arches well and truly filled, significantly more at the back than the front. So shoot me.

## Heady roar

If I'm honest, I like the idea of big power and fast cars, but it's not the be all and end all for me. I've done plenty of go-karting, and I can see the red mist as much as anyone else, but I've never raced a car on the quarter mile, so to have built a car with a balls-out IDA motor is perhaps a little, well, unnecessary. I blame Ivan entirely. Having spent untold hours in both of his '67s, the heady induction roar of those open intakes is indelibly printed on my mind. So when he offered me the 2007cc motor out of his beige '67, complete with the pair of NOS Italian firebreathers he'd recently bought from Kobus Cantraine, I snapped it up. It was in pieces at the time, but the sum of its parts in no way added up to what I gave him for it, so thanks mate.

> "I like to see my wheels and tyres, and I like my 'arches well and truly filled"

The real problems started with the paint. By the time the car was de-chromed and had the few small repairs done, it had enough little patches of red oxide primer to convince me to bare metal it at home in my garage. Nobody was blending paint back then, and besides I've always been into shiny, finished cars. In search of that mythical perfect paint job, I turned to FH Ellis Coachworks in Odiham, Hampshire for its fresh coat of not quite Jungle Green paint. Fintan, Paul and Mark made a fine job of it, but the process utterly wiped out my available funds, which brought the whole build to a shuddering halt. The beautifully painted body and 'pan took root in Steve's folks' garage and I started going out a lot more.

I've owned numerous other VWs in the interim, but really struggled to find the impetus to get back on with my Oval. It took the imminent arrival of my little boy, Henry, in 2012 to finally kick me into action and screw it all back together for The *VolksWorld* Show 2013. I did the majority of the work myself at Steve's but enlisted the help of Mark Dryden at Flatlands Engineering in Norfolk when my skills and knowledge ran low and time was running out.

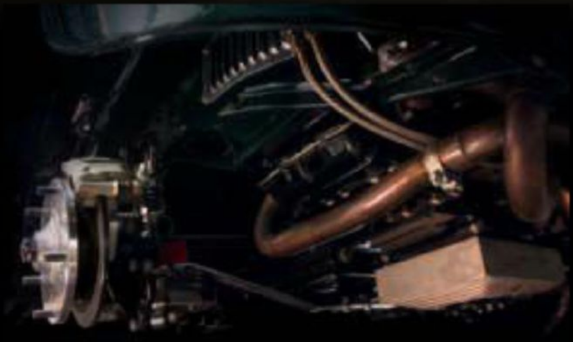
Cost-wise, by today's standards the car didn't cost a fortune to put together. I was fortunate to be able to exchange the 'pan blasting and re-chroming work for magazine features, the engine powder coating was a freebie and Custom & Speed Parts generously gave me an early set of their front disc brakes and a Python exhaust to evaluate. The real reason is because I bought the parts used before the internet boom. NOS Oval headlight lenses? A tenner the pair at Stanford Hall. 1950's VDO trip speedo? £45. You get the picture.

## TECH INFO

**ENGINE:**
2007cc Type 1, rebuilt by Dan Simpson; AS21 Rimco super case; Pauter Machine 78mm wedgemated crank; Rimco VW super rods; Mahle 90.5mm stroker barrels and pistons; Pauter 'B' heads with 42 and 37.5mm Manley stainless steel valves and 12mm plugs; match ported Skat Traks; dual Italian 48IDA Webers; CSP linkage; Engle FK10; Magnum straight cut gears; Berg 1.4:1 rockers, Stinger ignition and equalizer pulley; CSP Python exhaust; 9.5:1 compression

CSP Python exhaust is neat and functional, and avoids having an ugly 'turbo' muffler hanging out the back

I don't recommend them, but I love the look of my JT aluminium beam. CSP discs, on the other hand, I do recommend



More CSP discs, Fram filter mount on the n/s bumper hanger and louvred ali inspection panels

> "No one will ever see it. That's not the point. I know it's there"

Again thanks to Ivan, I had a result with a part-built race car project I bought and then parted out. That yielded the rollcage, anti-roll bar and camber compensator, as well as a 2.0-litre engine with twin 45 Dell'Ortos. In line with my floorpan detailing theme, I had the ARB and camber compensator chromed, the latter by The London Chroming Company. It cost more than the part itself, and no one will ever see it. That's not the point. I know it's there.

There were a few items I really badly wanted, and a JT aluminium beam was one of them. I think it was all to do with the image I had in my head of a black and polished 'pan. It had to be an early one, with cast shock towers. One eventually turned up, and I had it. It looks good polished, but there are inherent problems with using one on a street car that far outweigh the visual benefit.

And so to why I'm selling it, after 20 years of ownership, 19 of which it's been off the road. Simply put, it doesn't fit my lifestyle these days and I'm not using it. I've had people tell me to fit carpets, some sensible seats and make it more useable. Others have said put it back to stock. The bottom line is I'm not prepared to compromise. What you see here is how I visualised this car when I was a younger, more footloose man. I've made some foolish errors along the way, but the one thing I can say with impunity is I have not deviated from my vision. ■

Thanks: Tim Carter, Carl Parker, Ivan, Steve, Chris and Lynn Gosling, Dr. Detail, Fintan, Paul and Mark at FH Ellis, Mark and Dean at Flatlands Engineering, Al the Spark, Dan Simpson, Pete the Greek, Marque Restore, Perfect Coatings, Alan, Phil and Simon at Creative Coachworks and John the engineer.

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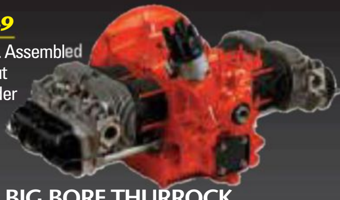

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### BIG BORE WATER-COOLED TRANSPORTER

**In exchange for 1900cc.** As 1·9 (left) but with 2000cc pistons and liners, and new heads. ***DIY: £1,799***

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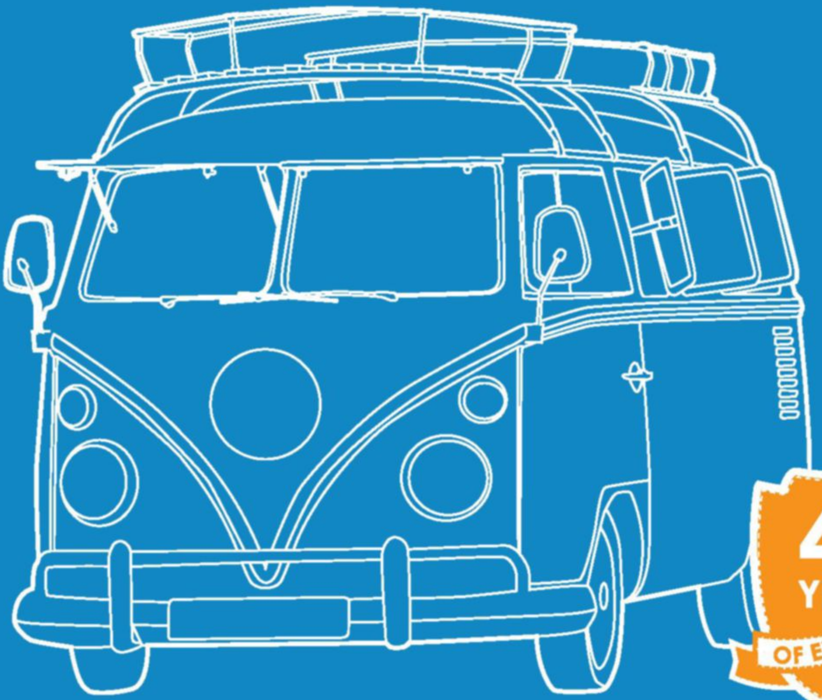

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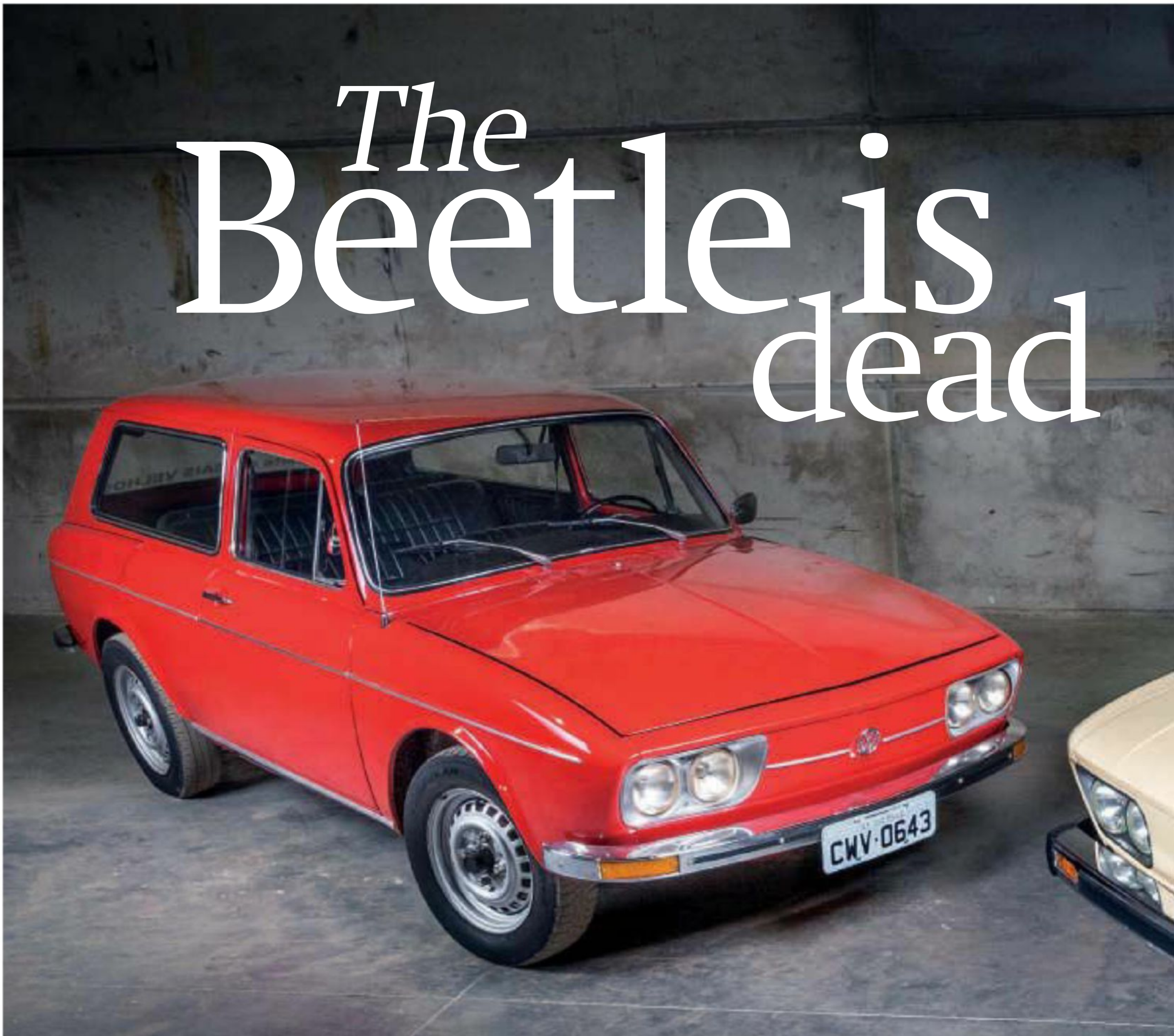
# The Beetle is dead



Let's get something straight before we go any further. Neither of these VWs are Type 3s! The misconception could be down to the fact the red car uses the same 'pancake' engine as a Type 3. This was a necessity for the new Variant 1600 as it needed a flat engine so the loading height was lower, but the Variant 1600 was nothing more than an old design updated to dupe buyers into thinking they would be ahead of whatever the Brazilian equivalent to the Joneses is. The contemporary Type 4 headlights and new front end looked modern but, from the windscreen back, VW didn't bother changing a thing.

The beige car here, on the other hand, is a very different story. At its launch, the Brasilia was modern, brilliantly packaged and succeeded in meeting its brief head on. The reason it worked was it was a blank canvas creation, rather than a failed lemon that had been adapted. VW Germany did what it did and, in the case of the Brasilia, VW do Brazil did what it did, and it did it very well indeed. The design brief was to create a successor to the Beetle, which embodied the character of the Beetle in a more modern body that not only offered more space, but also made the most of said space. The Brasilia nailed it, not just in terms of design, but also in sales. So, let's dig a bit deeper.

## Coffin Joe

In VW's Brazilian genealogy, the VW Variant 1600 comes first. It is closely related to the VW 1600 four-door saloon VW do Brazil had manufactured since 1968, and was nicknamed *Zé do Caixão* (Coffin Joe) as it was a car most people wouldn't be seen dead in. It was that ugly. This car was not a Type 3, or even based on a Type 3. It was, apart from a few small changes in detail, a production version of a shelved Beetle replacement project VW in Germany carried out at the end of the 1950s. The car carried the VW experimental prototype number EA97 (EA is an abbreviation of *Entwicklungsauftrag*, which translates to design assignment) and had an upright flat-four engine.

Wolfsburg started the EA97 project in 1957 and,

Designed, or sold, as successors to the Beetle, these two Brazilian-built VWs appear very similar at a glance, but looks can be deceiving…

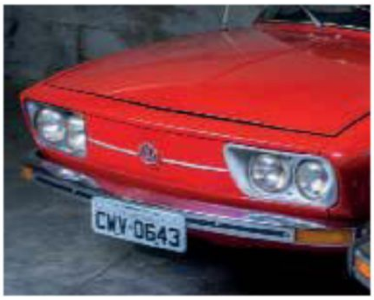
**Words** Ivan McCutcheon **Photos** Dan Pullen

although it was based on the Type 1 (Karmann Ghia) chassis, it moved away from the classic Beetle shape to a modern, three-box saloon, very similar in looks to the new VW 1500 (what we now know as the Type 3) that was under development at the same time and went into mass production in 1961.

## Unstable at speed

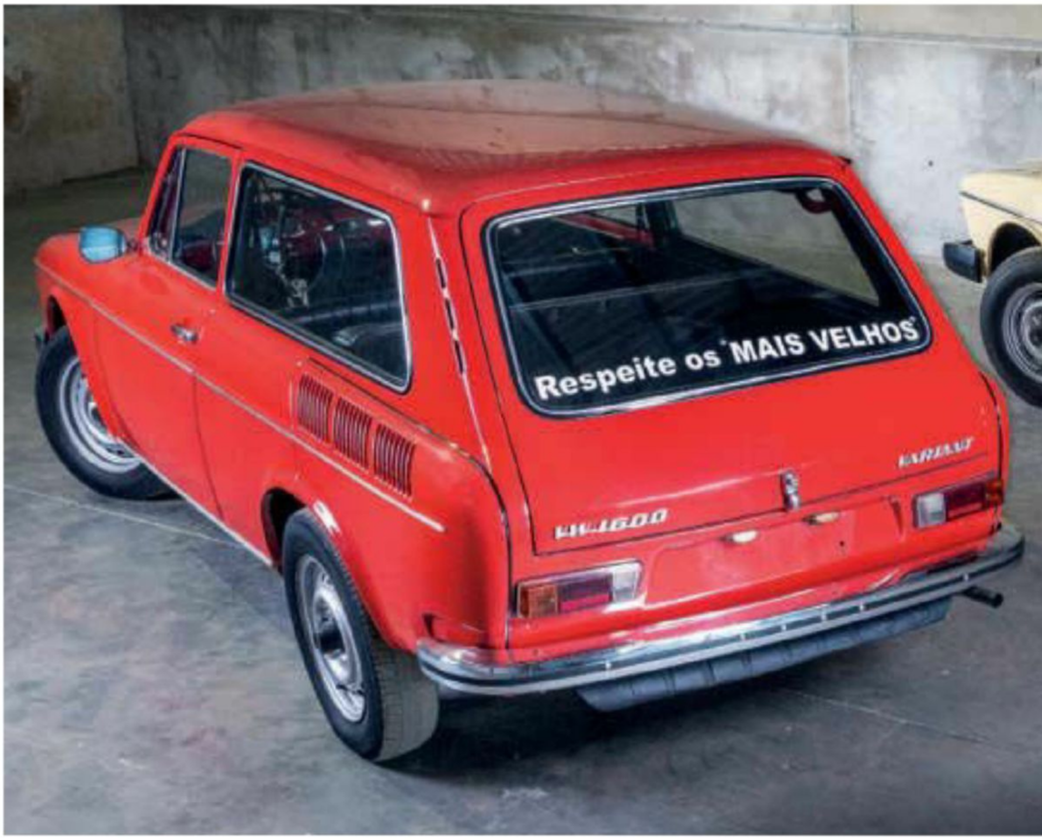
The EA97 came very close to being built. The tooling was made, 200 test mules built for evaluation and rigorous testing undertaken. But in the end VW decided the EA97 would be positioned too closely the new Type 3 and pulled the plug in 1960. Reports suggest the front end of the car became dangerously light and unstable at high speed and hint at this being the deciding factor.

If this is correct, it seems surprising that, eight years later, VW do Brazil should not only bring the EA97 project back to life, but put it into series production. Was VW looking to recoup money lost through its earlier mistake? Would the new chairman of VW do Brazil, Rudolf Leiding, have had any part in something like this? Leiding was VW's golden boy at the time. He had worked under Nordhoff and, prior to his new posting in Brazil, had been charged with sorting out the Ingolstadt factory after VW bought out Auto-Union (Audi). After he successfully



The front of the Variant 1600 was revised for 1972

When VW do Brazil facelifted the Variant, the rear remained the same



Was it VW do Brazil's boss, or American designer, Brooks Stevens', work on the VW 412 that started the VW slant nose look?

completed this task, he was sent to Brazil and, within three years, had turned the company around and production had risen by 50 per cent. Job done, he returned to Germany as Chairman of Volkswagen.

Leiding must have viewed the EA97 as an easy way of adding a larger car to a small range. Wolfsburg made some modifications to suit the market it was aiming for – South American taxi drivers – primarily changing it from two to four-door format. The headlight and tail lights were enlarged and a distinctive, bulky, double bumper added at the front. The sort of thing that might cure a stability issue…

## Sinking feeling

The revised production tooling for the EA97 was loaded onto a ship destined for Brazil, which only got as far as the English Channel before sinking. Fortunately, it came to rest at a depth allowing salvage of both ship and cargo, though the rescue operation and subsequent restoration of the tooling set the project back by a year.

When it finally arriving in Brazil, production commenced at VW's São Bernardo do Campo plant in 1968. The car was sold as the VW 1600, a three-box saloon some confuse as being Brazil's version of the Type 3 Notchback. However, you won't find a useful luggage space under the rear lid, but an upright, Beetle-style engine. Luggage space was limited to the area under the bonnet only. Make no mistake, a Type 3 is a superior vehicle in every way to the VW 1600. When the new VW Variant 1600 was introduced in Brazil in 1969, it did feature the Type 3's 'pancake' motor design, but this was the only element it shared with the German-built Type 3

> "An easy way of adding a larger car to a small range"

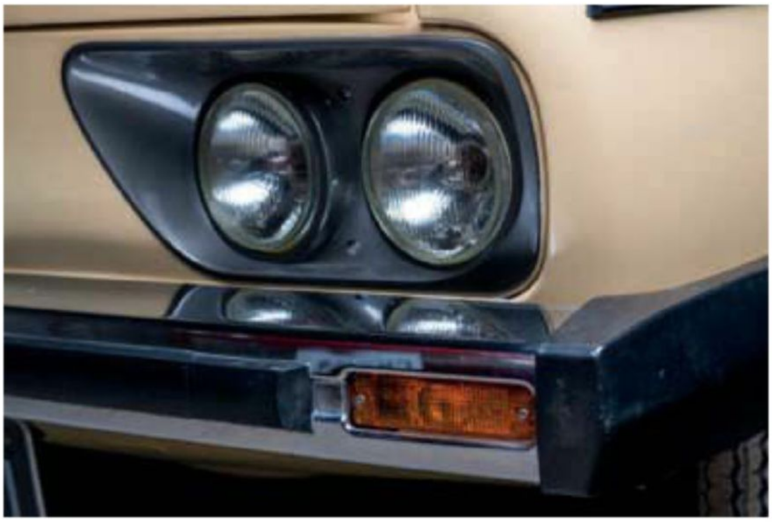
Unique to Brazil, the same rear light units were fitted to the Variant throughout its production run

At a glance you may not spot just how different these two VWs actually are. Designed a decade apart, they were aimed at entirely different buyers

The Brasilia is arguably the most successful VW to use Type 4 headlights

Volkswagen's Beetle replacement and first foray into the hatchback market

From 1979 to 1982, Brasilia bumpers had plastic end caps



The 'new' VW Variant was yet another shelved EA project Germany sent to Brazil. It had plenty in common with the Coffin Joe, including its Type 1 front suspension. Initially, just the two-door estate car joined the Coffin Joe, but the Brazilian range was extended in August 1970 with another German EA car, the VW 1600 TL, a fastback coupé. The shared lineage of all three cars was obvious – they were all pug ugly! – and low sales figures reflected this The VW 1600 saloon may have sold to taxi drivers, but wasn't a sales success and, in 1971, after just 24,475 had been produced, VW buried the Coffin Joe. As the Variant and TL shared its uninspiring appearance, Leiding sanctioned a re-design of both. He promoted the use of the twin headlight units, also found on the VW 412, SP2, Brasilia and Type 4, and a more modern front end that tilted inward from the bonnet to the bumper. The Variant's facelift ended at the windscreen, though, the rest didn't get a look in, and the revised Variant quickly gained the nickname catfish head.

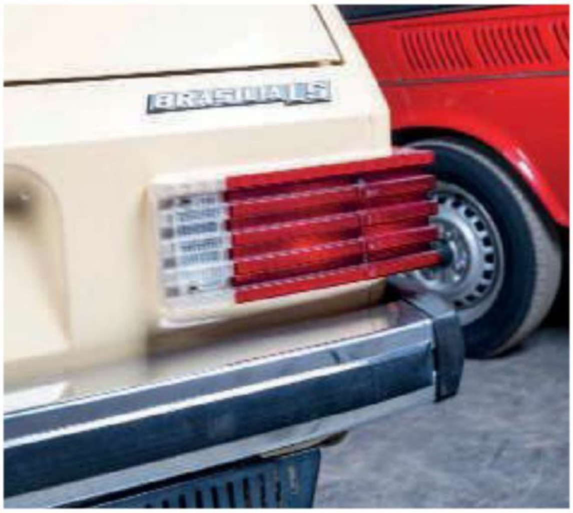
Despite that, the makeover was met with positive acceptance and the car was selected as Brazilian Car of the Year by the magazine *Autoesporte* in 1971.

From its launch, the Variant and TL were sales successes, helping VW dominate the Brazilian market, with a massive 70 per cent of total passenger car sales.

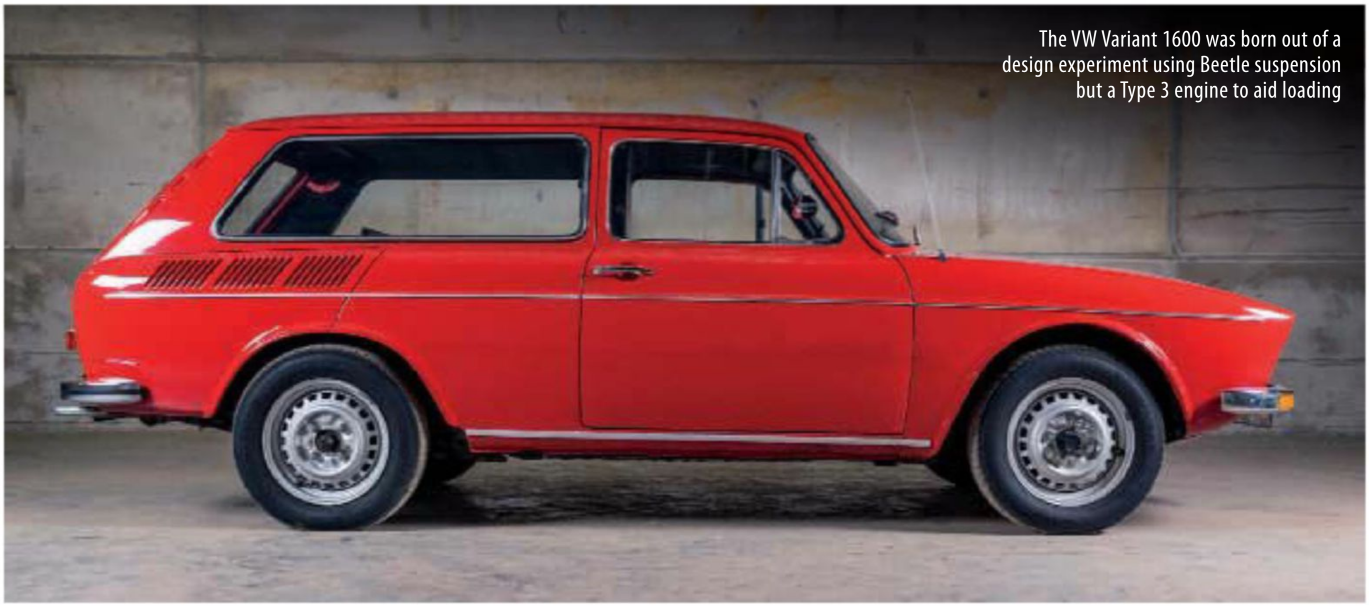
> "Designed as a replacement for the Beetle in Brazil"

## Brasilia love affair

When VW do Brazil then launched the Brasilia in 1973, the popularity it was met with proved to be a double-edged sword for the company, as it had not factored in the severe hammering it would take on the Variant 1600. Sales of that



The Brasilia's rear light units were enlarged in 1979 and featured integral reversing lights



The VW Variant 1600 was born out of a design experiment using Beetle suspension but a Type 3 engine to aid loading

A body colour-painted dash works really well on the Variant, doesn't it?

The VW1600's dashboard screams 1960's Volkswagen

model dwindled each year, but VW soldiered on with production until they had no option but to drop the car in 1977, by which time 256,760 had been made. Which is not bad considering it is based on a car Volkswagen in Germany chose not to make.

The Type 321, or Brasilia, was designed as a replacement for the Beetle in Brazil. The project started in September 1970 when Rudolf Leiding directed his design team to recreate the Beetle with the current market in mind. Leiding's brief was the new VW should be more practical, equally economical and larger than a Beetle.

It was a smaller car than the Variant 1600, with modern, straight lines and larger areas of glass. It was based on the Type 1 Karmann Ghia chassis, so had the same wheelbase as the Beetle. The new Type 321 shared the Beetle's economic benefits and robustness, which were essential in a country where 90 per cent of the roads were unmade and cars were literally driven into the ground.

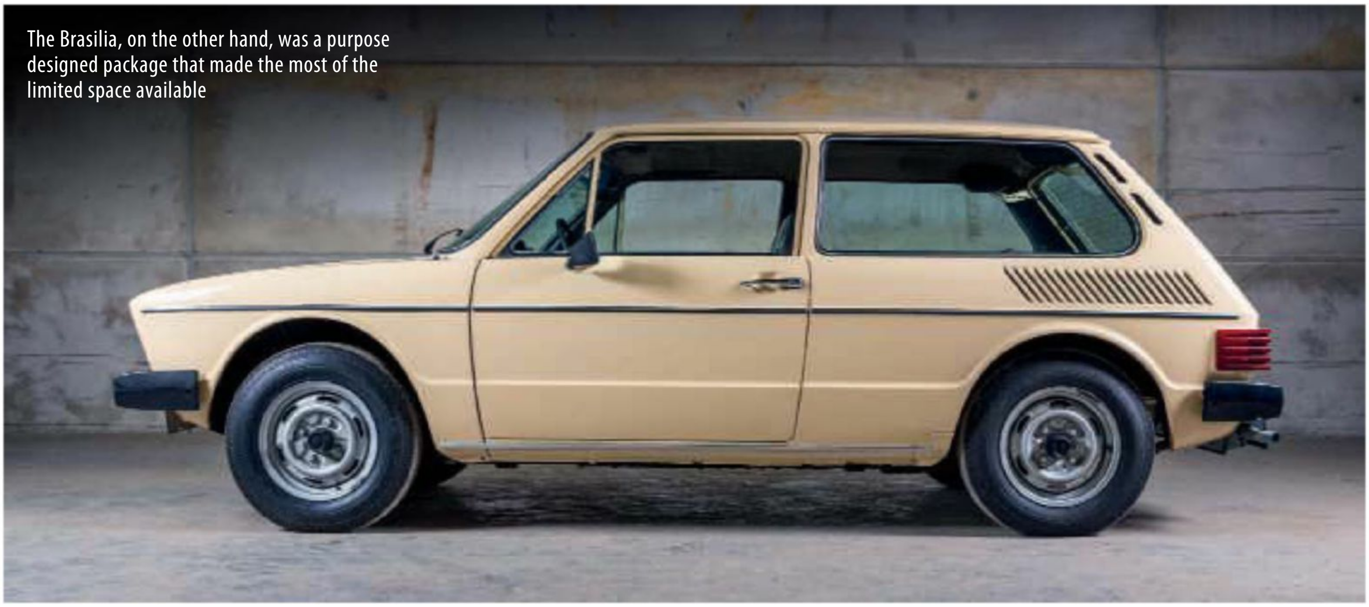
## TECH INFO

**MODEL:** VW 1600 Variant
**PRODUCED:** 1969-1977
**ENGINE:** Type 3-style 1584cc twin port with dual Solex carbs
**POWER OUTPUT:** 65bhp
**TOP SPEED:** 83.9mph
**0-60MPH:** 21.2 seconds
**SUSPENSION:** Type 1 balljoint front beam.
**BRAKES:** Disc front / drum rear
**WHEELS:** 15 x 5in steel
**LENGTH:** 4,138mm
**WHEELBASE:** 2,400mm
**WEIGHT:** 925kg

The front seats are big and comfy, quite unlike the seats we're used to in European VWs

That steering wheel, horn ring and horn push are unique to Brazil, and we love 'em all!

> "From its launch, the Variant and TL were sales successes"



The Brasilia, on the other hand, was a purpose designed package that made the most of the limited space available

The Brasilia's gauge pod is seriously '70s

Still wrapped in protective plastic, this Brasilia has perfect upholstery

The later, top-of-the-range LS model came with front seats sourced from the larger Passat

## TECH INFO

**MODEL:** VW Brasilia
**PRODUCED:** 1963-1982
**ENGINE:** Type 1-style 1584cc twin port with dual Solex carbs
**POWER OUTPUT:** 65bhp
**TOP SPEED:** 86mph
**0 TO 60MPH:** 23 seconds
**SUSPENSION:** Type 1 balljoint front beam
**BRAKES:** Disc front / drum rear
**WHEELS:** 14in steel
**LENGTH:** 4,001mm
**WHEELBASE:** 2,400mm
**WEIGHT:** 890kg

Essentially, head designer, Marcio Piancastelli, invested his skill in creating a car offering everything the Beetle provided, but with more space and a more modern appearance. The Brasilia was small on the outside, but big inside! It was not an estate, but a hatchback, and it was actually VW's first, pre-dating the Golf by a year.

Volkswagen do Brazil named its new car after the country's ultra-modern, purpose-built, capital city, which went on to attain UNESCO World Heritage status. Clearly, Volkswagen saw its new car as worthy of the name.

## Best seller

The Brasilia was lighter, more modern and, importantly, cheaper than a VW 1600 Variant, but more expensive than a Beetle and so fell squarely between the two. This wasn't factored into the original brief but, such was its popularity, buyers of the new VW Brasilia willingly paid above list price to secure

> "More practical, equally economical and larger than a Beetle"

Unique to the Brasilia, the steering wheel is so tacky but so cool

The steel wheels with square vents were shared with Brazilian-built Beetles

SP SAO PAULO
CWV·0643

one. It quickly became the outright best-selling car for the company, with three Brasilias sold to every one Variant.

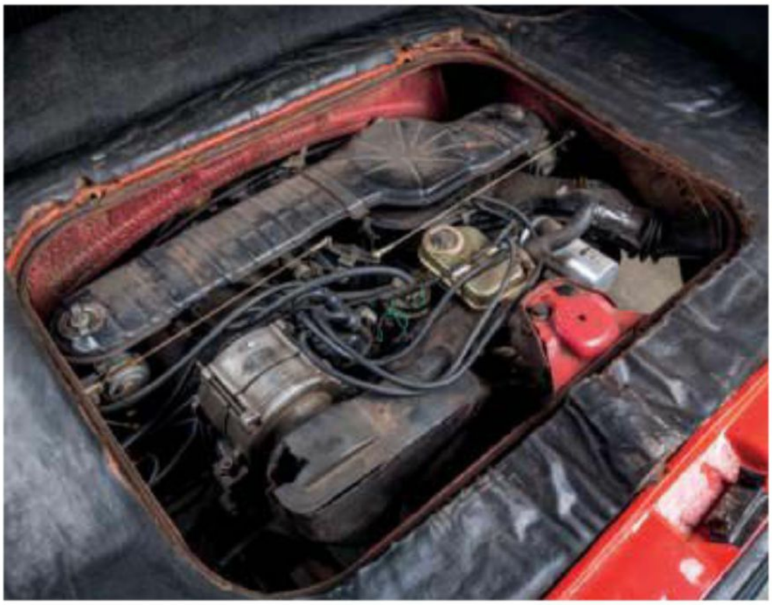
There's no doubt the Brasilia was a success in its role as a replacement for the Beetle in South America. But it wasn't without its faults. One of them was amplified, literally, when VW added twin 32mm Solex carbs to the standard 1600 engine in an attempt to increase power to keep up with the competitors' offerings. The single-carb car was deemed as noisy as a Beetle and hard to hold a conversation in at higher speed, adding twin carbs made matters a lot worse. Oh, and there were numerous complaints from owners who found the engine basically inside the car meant heat levels inside became unbearable. While the Beetle offered valuable space behind the rear seat for luggage, the Brasilia did too, but with the major benefit of being able to load large items through the rear hatch.

## Top of the range

The example in the photographs here was built in 1980 and is the top-of-the-range LS model. This means it has a 65bhp, twin-carb, 1584cc, twin-port engine. Introduced in 1979, the LS came with headrests on the front seats, exterior side mouldings, rubber bumper buffers and a choice of metallic paint colours. The plusher interior featured VW Passat front seats with cloth facings. Optional extras included such as an electric rear window defroster, clock and vacuum gauge. All models were equipped with front disc brakes.

Unbelievably, it has covered less than 5,000 miles from new and is 100 per cent original, right down to the crossply tyres. It was found at the end of last year in Brazil by head honcho of Just Kampers, Mark Reynolds. It had been in a private collection and is literally as good as new. In fact, we'd go as far as to say we doubt there is a better example in existence. As visitors to The *VolksWorld* Show will know, the car formed part of the special Brazilian VWs display we had there this year, which featured a line up of South America-built cars never before seen in Britain. ■

> "Selected as Brazilian Car of the Year in 1971"



The Variant powerplant came from the Type 3 and is a 1584cc twin-carb unit. Note it has an alternator from the factory

Although they share similar front-end styling and use the same light units, the Brasilia was designed this way, whilst the Variant ended up like this in an attempt to boost sales

These Pirelli crossplys are the original tyres the car came from the factory with

## “VW’s first hatchback, pre-dating the Golf by a year”

The Brasilia gained twin 32mm Solex carbs in 1979 in an attempt to keep up with the performance of its competitors

## BEHIND THE WHEEL

### Variant

As I jumped into the Variant on a hot and sticky day in São Paulo, I was transported back to when I was in my late teens and had a succession of German-made Type 3s. They were always faithful and useful cars, and so I’d have to say is this Brazilian-made model. The painted dashboard and recognisable switches are reassuringly classic 1960’s VW, even though it was built in the 1970s, so I immediately felt at home.

It offers a smooth ride with great visibility. The soundproofing on the engine lid hatch and rear deck help make the distinctive air-cooled engine sound almost distant.

What’s not to love about a very practical ‘estate’ car, with rear seats that fold flat, that you’re unlikely to ever see another one of in the UK?

### Brasilia

The Brasilia is Mk1 Golf meets air-cooled VW. If you want an air-cooled classic to jump in for a long journey, this is the one I’d choose.

The dash reminds me of the late ’70s, with its 50 shades of brown, but the interior spec is way higher than we’re used to in air-cooled VWs. The seats are very comfortable, it has rear speakers and a parcel tray as standard, along with two-tone beige and brown trim, which looks much better than it sounds!

Again, the rear seats fold flat making it an eminently practical car that will make you smile as you drive effortlessly along. As an added bonus, there is a massive space for storing ‘almost anything’ under the bonnet, which is another big plus on this truly useable classic. To make this my daily driver, the only thing I’d do is remove the plastic covers that have protected the interior from new, as on a hot day it all gets a little bit sticky.

***Mark Reynolds, Just Kampers***

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# Cooking on Gazz

Described on an internet forum as 'the very definition of home built', Gazz Priest's track day 1303 is an inspiration to us all

**Words** Mike Pye **Photos** Michael Whitestone

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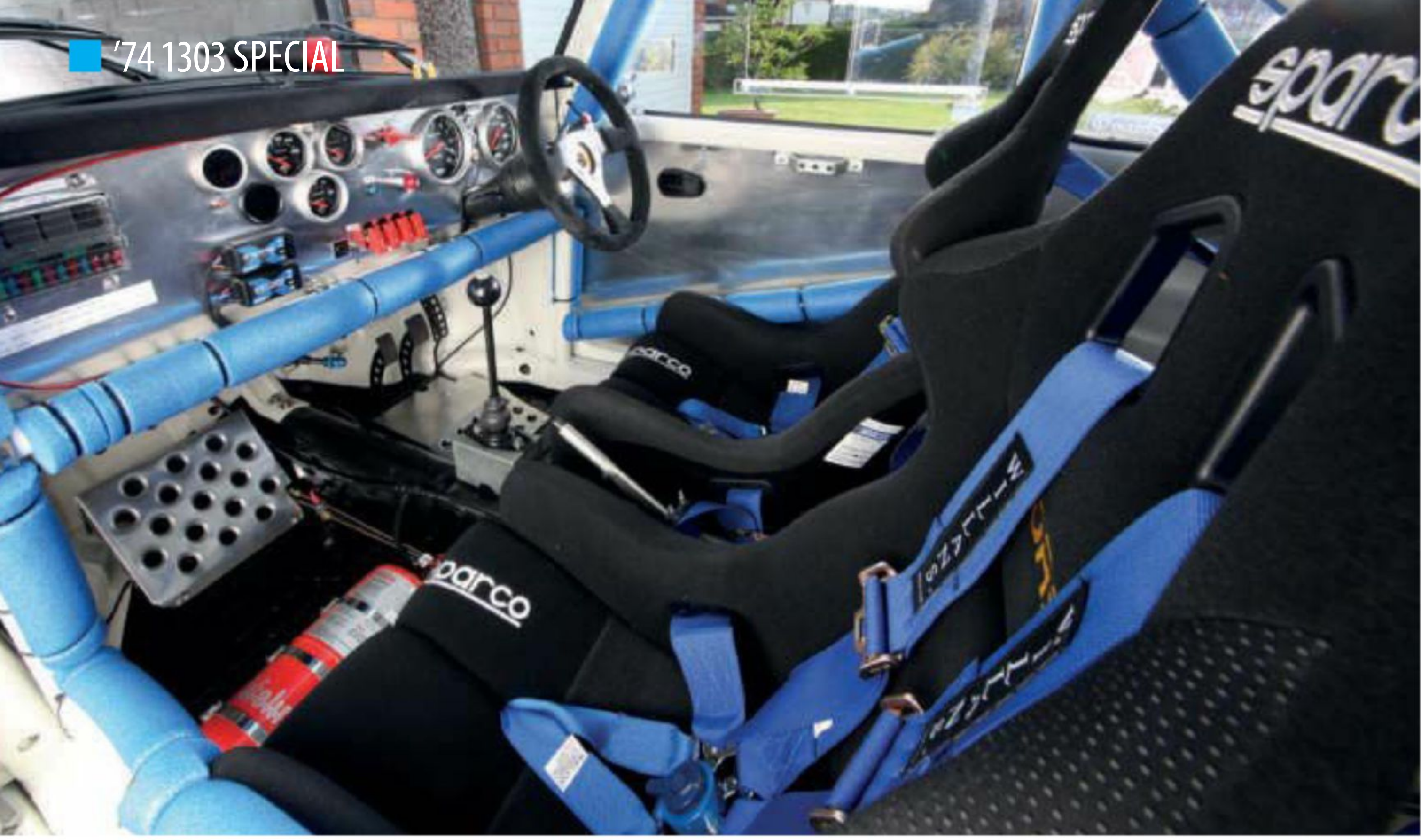
TORQUES

I've been around VWs for long enough now to know when something a bit special comes along, and Gazz Priest's 1303 is definitely that. I'm not even going to start to describe the heroic restoration work that went into this car, other than to repeat Gazz's description of the Helios Gold '74 Big Beetle he bought for £250 through VZi as "an absolute basket case". What I will say is he did all the work himself in a single car garage at home, including teaching himself to weld, fabricate, lead load, body prep and paint. That's right, he did everything, including painting it himself in 2-pack in the very garage you see in these pictures. If you want the gory details, set aside a couple of hours and read the build thread at www.volkszone.com/VZi/showthread.php?t=553599), or look up 'The sorry looking big 1303 is to become a track car'. Be warned though, it contains graphic images some viewers may find disturbing.

What makes this car special, however, is Gazz, and the modifications he has made to it. He's always been a VW guy, but has spent his working life as a motor vehicle engineer, some of it on classic Jags, some on the Isle of Man preparing Jaguar race cars and track day machines, a stint at a performance



^ Sparco Corsa glass fibre race seats, Willans six-point harnesses, plumbed-in fire extinguisher, alloy dash with faux Alcantara anti-glare top… it's all a far cry from the padded dash and basket weave vinyl this Big Beetle came with

car specialist and currently works at a water-cooled VAG specialist in the Stoke-on-Trent area. Which all goes some way to explaining how this car came about. "I've always been into Beetles, but have been building and maintaining classic race cars for about 10 years now, and have been around a few roadgoing Porsches for the last four, so I had a few ideas for the track. Some may work, some may not, but I'm looking forward to finding out. That's half the fun for me. I wanted to build a track day car that is legal to drive on the street – just – out of a Beetle to prove you can make one work."

With his background and knowledge, Gazz knows full well the easier route would have been to construct a spaceframe and build a silhouette racer, but feels that would have been cheating. "I wanted to keep as much VW about this car as possible so, apart from the wings, it's an all-steel body. It's still got the stock control arms at the front and I've used all the original suspension pick-up points. I've even used steel, non-turbo 944 A-arms at the rear rather than aluminium ones as they're closer to the stock VW parts." Okay, so there's a lot of non-VW parts on the car as well, but as anyone that's spent any time around circuit race cars will know, nobody uses OEM suspension and brake components, so it's no surprise to see Avo adjustable coilovers at all four corners, and a full complement of vastly superior Porsche brakes, comprising 944 hubs, 944 Turbo Brembo 4-pot calipers and Boxster S discs.

"I've used all the original suspension pick-up points"

Similarly, the pedals are no longer VW parts, nor the steering, but the latter shows Gazz's ingenuity to the full. He could have used a late ('75-on) 1303 steering rack, but instead chose an LHD Audi S3 one, flipped and retro fitted with smaller diameter 14mm rack arms, which take Mk1 Golf track rod ends that fit straight into the holes on the 944 hubs. The top part of the column is stock, with the steering lock removed, and the middle section is Mk4 Golf. "I sleeved it, cross pinned it and welded it. If it all works, I'll look into getting this made up as a proper item by someone like GKN," Gazz explains. The reason for this extra level of complexity is the S3 racks offers just 2.5 turns lock to lock and the option of hydraulic power assist should Gazz decide he needs it in the future. For now, though, it's working as a manual rack.

## Detail by design

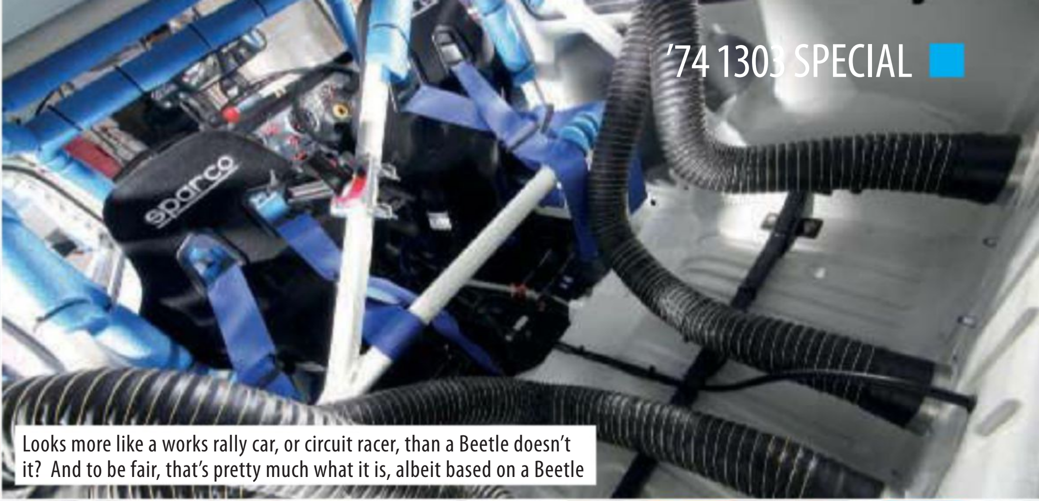
You don't just bolt a fancy pedal box to the floor in a car like this either. You put it in the correct place for the driver, which here meant moving pedal position an inch or so rearward, offset to the right a touch so they are central to the driver's seat and sunk into a custom made tray, with bracing underneath to stop anything flexing under, er, enthusiastic use. That, in turn, meant notching the driver side heater channel for clearance.

Fitting those Sparco Corsa seats required some careful planning too, as there's only a few mill' between the 'wings' at the top. Valuable time was then spent ensuring Gazz is comfortable when strapped in, wearing a helmet and HANS device, and can reach all the controls, monitor the gauges and see in his mirrors safely. By my reckoning, Gazz tried at least three sets of mirrors on the car before settling on the ones you see here. In short, they weren't chose for form, but for function.

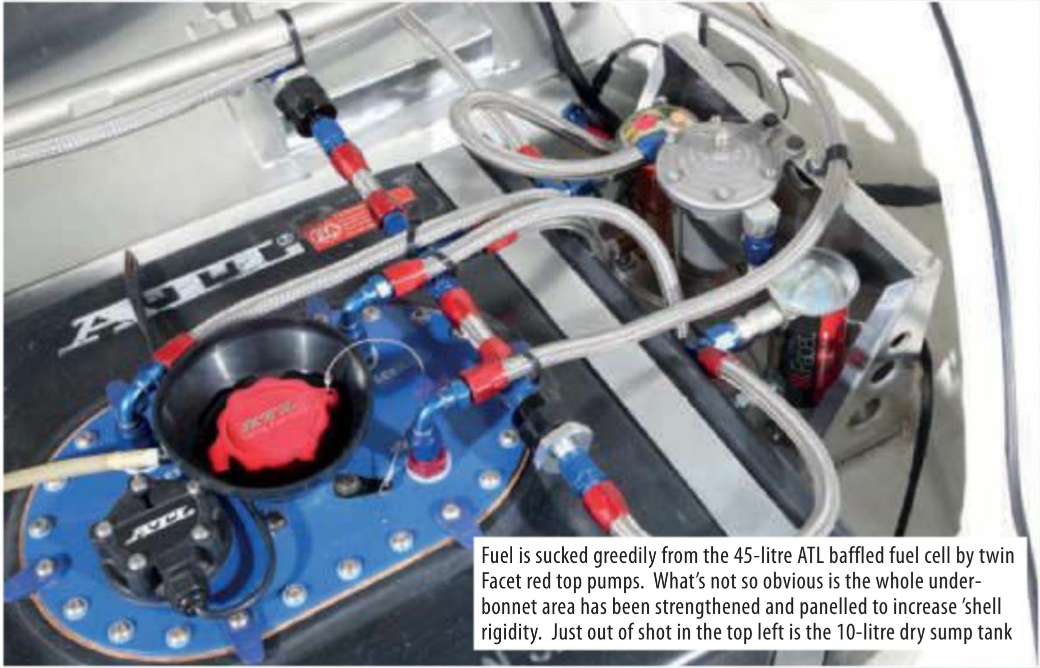
That's not to say this car doesn't have its fair share of form though. It's clear speaking with Gazz that he agonised over whether to use wide wings or not, how to best make the bumpers work with the wings, what spacers and offset wheels he needs to place the wheels exactly where he wants them in the 'arches, even what colour to paint the wheels. Gone now are the very desirable

>

Hopefully, this part won't see too much use. It's a front tow strap if you hadn't worked it out



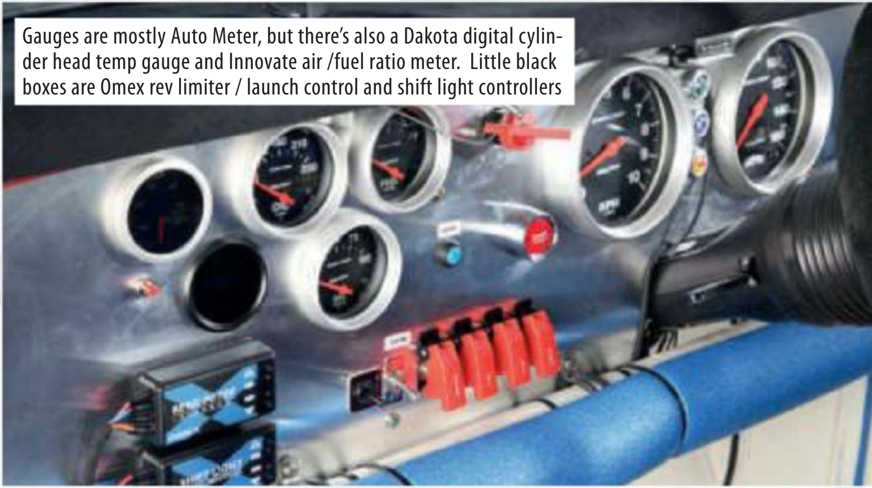
Looks more like a works rally car, or circuit racer, than a Beetle doesn't it? And to be fair, that's pretty much what it is, albeit based on a Beetle



Fuel is sucked greedily from the 45-litre ATL baffled fuel cell by twin Facet red top pumps. What's not so obvious is the whole under-bonnet area has been strengthened and panelled to increase 'shell rigidity. Just out of shot in the top left is the 10-litre dry sump tank

Quick release, suede-rimmed, Sparco wheel sits on a hybrid Beetle / Golf steering column. That red button is the launch control switch

Lexan door windows have sliders so Gazz can still visit his local drive-through McDonalds



Gauges are mostly Auto Meter, but there's also a Dakota digital cylinder head temp gauge and Innovate air /fuel ratio meter. Little black boxes are Omex rev limiter / launch control and shift light controllers

The C, F and R on the triple reservoirs denote clutch and front and rear brake circuits

Under that drilled alloy cover is an OBP Motorsport pedal box sunk into the floor three-piece Eta Beta Krones (too big and too heavy), in their place the 17-inch Porsche Cayman wheels you see here, though Gazz has more recently secured a set of 7.5 and 9 x 17-inch two-piece BBS LMs with the right offsets (23 and 15), which will allow him to ditch the spacers required with the Cayman wheels.

"Unlike drag racing, we can race in the wet"

Even the wiring loom has been carefully planned and custom made. Rather than make life simpler, Gazz made life more complicated by adding in extra items such as an electronic speedo, which picks up off the rear CV joint bolts, multiple engine sensors, twin electric fuel pumps, a two-zone heated windscreen, electric windscreen washer, intermittent wipers and a rear rain / fog lamp. "Unlike drag racing," he laughs, "we can race in the wet."

## A bit fluffy

It's all well and good building a car like this, but it takes experience and knowledge to make it all work together as a package and, while it's clear Gazz has both in spades, he's the first to admit he hasn't got the package right yet. "I've never been one for following trends, so if someone says something can't be done, it just makes me want to try and do it. This car's got Super Flo heads, which everyone says you can't use on the street, and a dog 'box. Admittedly, it's got a really tall first gear and close second to fifth, so it's not ideal for the road. Plus, the engine as it stands is gutless below 5,000rpm, at six it comes on song and it's a bit fluffy at the top end, so that still needs a bit of work to get right."

### TECH INFO

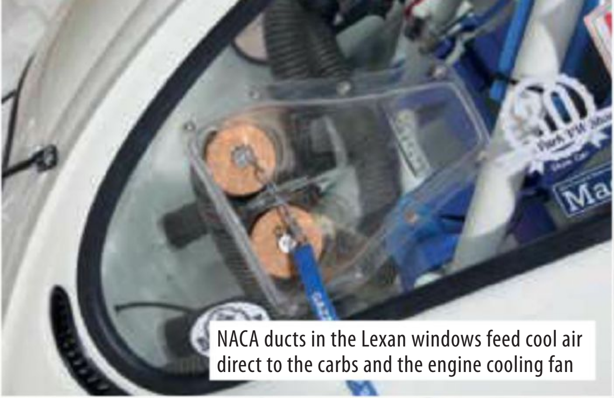
**ENGINE:** 2054cc Type 1; Scat Killer case; Scat flanged 74mm crank; 94mm Mahle pistons; Engle FK89 cam; 1.4:1 ratio rockers; Superflo heads with oval Cosworth-style ports and 48 / 40mm valves; dual 45DRLA Dell'Ortos (now 48mm Jenvey throttle bodies); CB Performance Magna Spark ignition; 204bhp at 8,400rpm

**GEARBOX:** Hewland Mk9 5-speed dog 'box; 2.416, 1.778, 1.318, 1.040 and 0.899 gears; 4.428:1 final drive; Quaife LSD

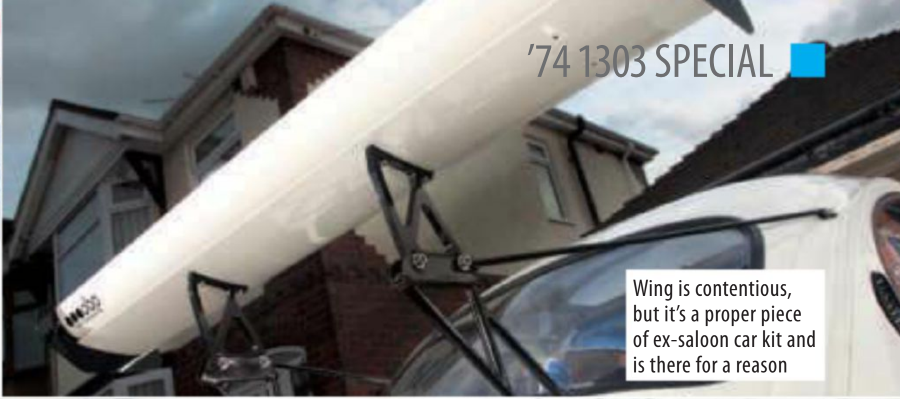
Ah, the engine. The full spec is in the panel above, so all I'll say here is the engine and 'box were bought second hand in 2001, long before the car itself. Gazz heard it run, then removed it himself from a Class 10 Autograss Buggy that had been competing against 300+bhp Specials. Let's just say with an FK89 cam, 11.25:1 compression, Super Flo heads and 204bhp at the wheels it's a bit lairy, and could do with more low down grunt. "I've done what I wanted to do with it, which was to drive it a couple of hundred miles on the street and get my full membership of SAS Renn Wagens, which I achieved by running a 15.3 at Cal Look Drag Day last year. It's not a drag race engine, though, and the car's not set up for drag racing. I was launching at 7,500rpm, slipping the clutch just to get traction and it was still bogging down and dropping off cam. It's ridiculous, I was getting 2.7-second 60ft times. But after all the support the guys have given me I had to at least do enough to get that sticker in the window!" says Gazz grinning.

"I've got the engine apart again now and I'm currently looking at JPM heads. They've got the cooling fins I need to make this engine work on the track, and what he's doing with VW stuff now is a revelation. The technology in my engine is good, but it's based on stuff designed in the late '60s and early '70s. Things have moved on since then."

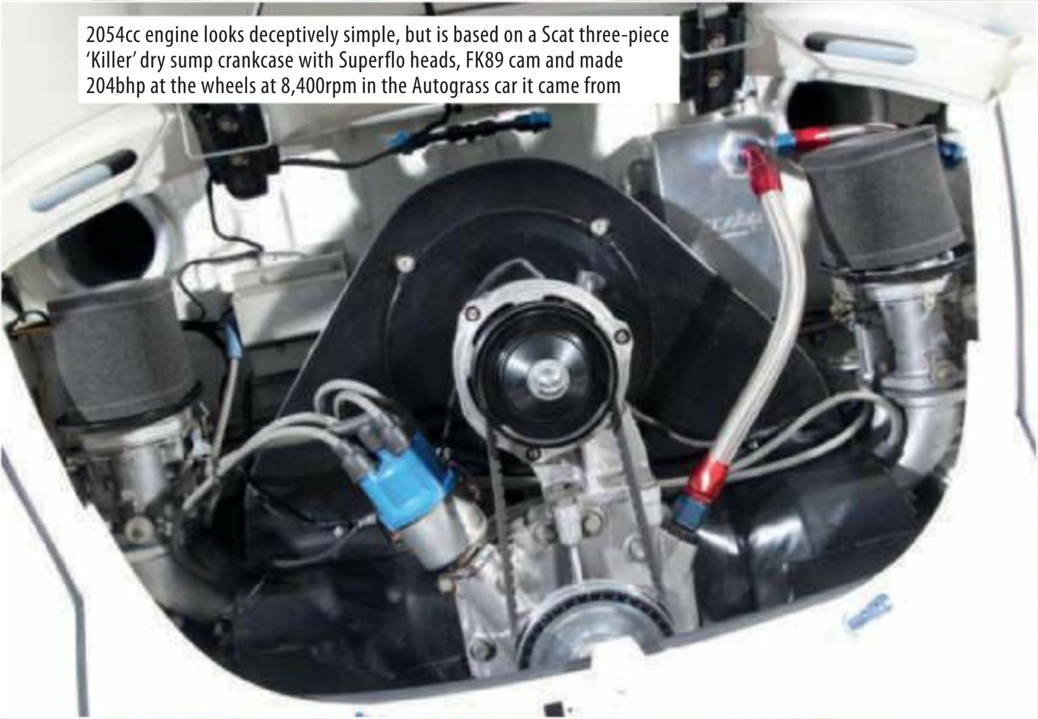
Just one of the many clever tricks on this car is the rear bumper. Due to the CSP 40 and 70mm wider flared wings, a stock rear bumper wouldn't work, so Gazz modified a front bumper to work instead. You'd never know if we hadn't told you, eh?



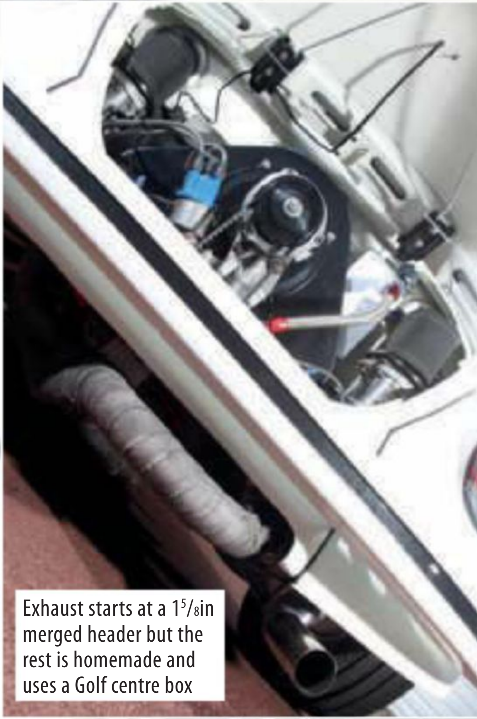
NACA ducts in the Lexan windows feed cool air direct to the carbs and the engine cooling fan



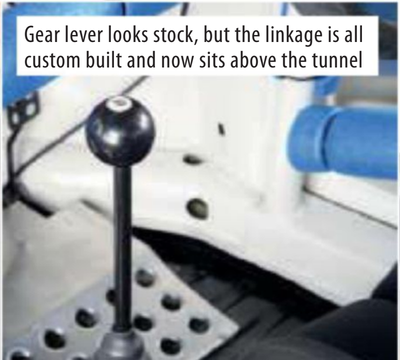
Wing is contentious, but it's a proper piece of ex-saloon car kit and is there for a reason



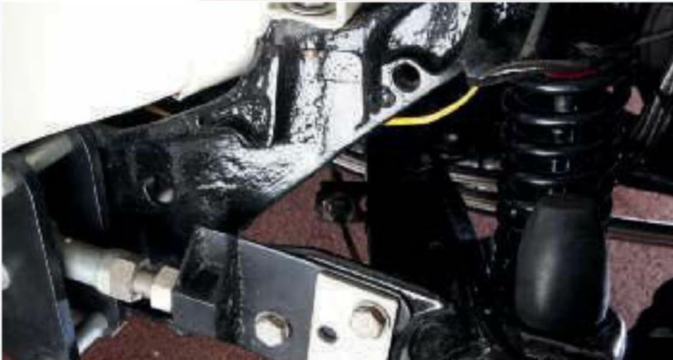
2054cc engine looks deceptively simple, but is based on a Scat three-piece 'Killer' dry sump crankcase with Superflo heads, FK89 cam and made 204bhp at the wheels at 8,400rpm in the Autograss car it came from



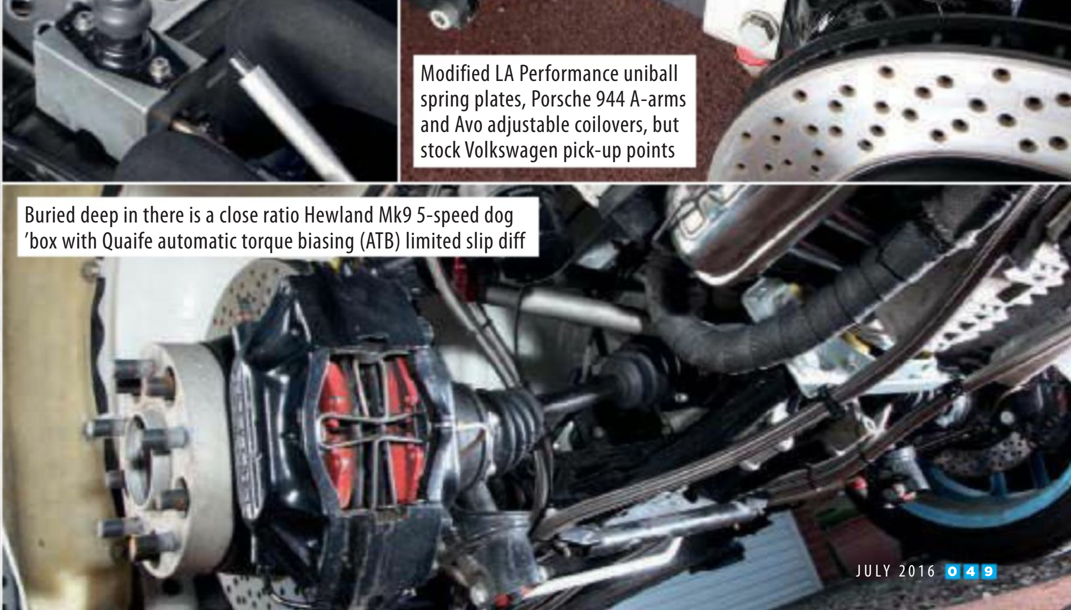
Exhaust starts at a $1^{5}/_{8}$in merged header but the rest is homemade and uses a Golf centre box



Gear lever looks stock, but the linkage is all custom built and now sits above the tunnel



Modified LA Performance uniball spring plates, Porsche 944 A-arms and Avo adjustable coilovers, but stock Volkswagen pick-up points



Buried deep in there is a close ratio Hewland Mk9 5-speed dog 'box with Quaife automatic torque biasing (ATB) limited slip diff

“I’m looking forward to getting to grips with the handling”

Current wheels are from a Porsche Cayman, 6.5 and 8 x 17, with 205/45 and 235/40 Kumho KU39 all-rounders. Paint colour is similar to Porsche Mexico Blue

In a last ditch attempt to make that old technology perform better, Gazz converted the car to fuel injection over the winter using Jenvey 48mm throttle bodies and Emerald K6 engine management. “The difference in driveability is incredible. I can at least drive it on the street now, but it still doesn’t have any power low down, and you have to use third in roundabouts just to keep the revs up to be able to get out the other side.”

Just stop for a minute and think about the reality of building this car, and painting it, in this garage. Then go and look at the build thread. Gazz priest, you have our respect

## Hair of the dog

The dog leg, five-speed Hewland gearbox isn’t helping for, despite being of the highest quality, including a Quaife ATB diff, it was built for short track oval work and, as Gazz later found out, had third gear fitted in the fourth position and *vice versa* so it could be rowed easily and quickly between third and fifth. “If you think it sounds weird, you ought to try driving it,” he laughs. Compounding that, the ratios were so low that at 7,000rpm the car was doing just 72mph, which explains why on his first run down the quarter Gazz clocked just 68mph terminal with the engine bouncing off the limiter over the line. Needless to say, the ratios need addressing, and Bears Motorsport are doing the necessary there.

“My aim is to be as fast around a track as I can in a Beetle. I’ve worked on lots of different track cars over the years and always looked at them and thought I can go faster in a Beetle. I live smack bang between Oulton Park and Donington, so I don’t have to drive too far to use the car. And that’s crucial as what you need with a car like this is development time. I’m really looking forward to getting to grips with the handling, but for now I’m just playing with the engine, trying to get that bit right.

As to the question of whether Gazz is ever going to race the car competitively, this was his answer: “I didn’t want to restrict myself by building it to a championship spec, I just wanted to build the car I wanted to build. Maybe, when the car’s dialled in, if I find an open championship that’s just done on power-to-weight breaks, I may stick it in just to see how it stacks up against other cars. For now though, I just want to have some fun in it, and prove to myself I can do what I set out to do with a Beetle.” ■

Thanks: Jon Saxton, Andy Cotton for help with the engine and small machining jobs, mum (Trudy) and dad (Michael), my cousin, Russ Heath, for doing the CAD drawings for the tanks I then had made by OBP, and all of the SAS Renn Wagens for their support.

## BEHIND THE WHEEL

“It’s extremely loud, I can tell you that. So much so I’m contemplating an intercom system so I can actually talk to a passenger when I’m driving. In the spec it is here, if you put your foot down below 5,000rpm there’s a lot of intake roar but nothing happens, so driveable isn’t really the word. When it comes on cam at 6,000rpm though, it really goes. If the car was lighter [it currently sits somewhere between 900 and 1,000kg dry] it would probably be better, but it’s still a full-bodied, mostly steel car.

“I can’t tell you too much about how it handles yet, but having a baffled fuel tank low and just ahead of the front axle line helps with the CofG and weight distribution, and you can really feel it on the front suspension. It’s much nicer to drive than a normally lowered 1303.

“It’s all a big learning curve, but one I’m really looking forward to getting to grips with on track.” ■

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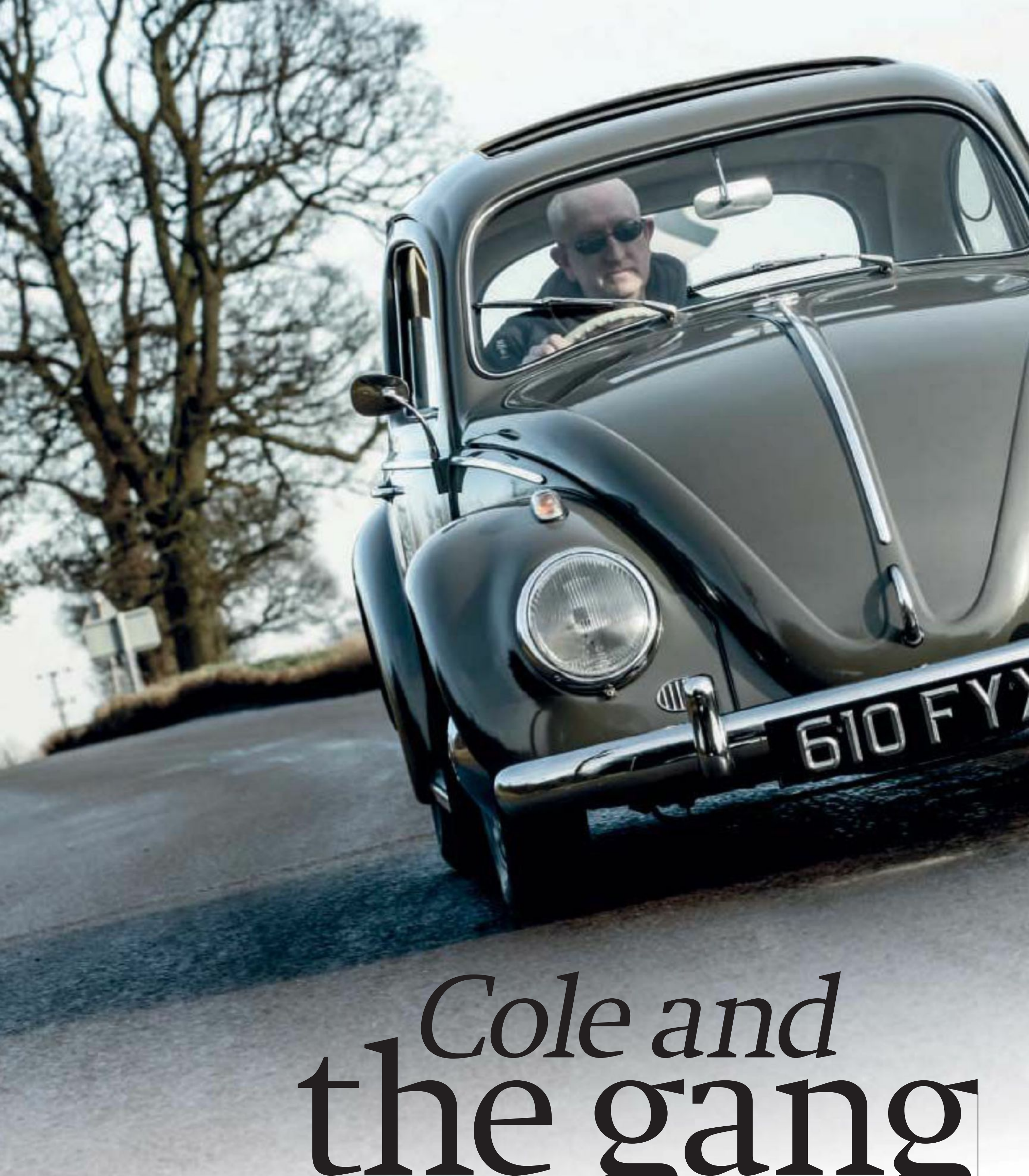

# *Cole and* the gang

### Not so much three men in a boat, but a story of three men and a car

**Words** Cathal O'Toole **Photos** Lyndon McNeil

As with any *VolksWorld* feature, the story about to unfold before you is about way more than just the car itself, it's about the owner, the people involved in the restoration and the journey they all went on in order to complete it. In the case of this Anthracite '63, there are three main protaganists we need to introduce. The first is Julian Robinson, who found the car in the first instance. Julian's is a name that will be familiar to some *VolksWorld* readers as he's the man behind the VW Parts Emporium and www.vwbug.co.uk. The second man of the hour is Hayden Watson, main man at Bedfordshire-based VW restoration shop, PanelKraft, who, as you'll no doubt remember, built the *VolksWorld* 2014 Best of Show-winning blue '67 Squareback belonging to Dave Pettengel.

And finally, of course, there's the owner of the car himself, Dave Cole, who has been involved in the VW scene for 30 years, in which time he has owned some six Beetles, a Mk1 Golf GTi, a New Beetle and a 1967 Split Bus that he has owned since 2001. Hayden restored that, too. Oh, and one final point to note is that all three men are the best of friends, although each would deny that and will happily hang the other out to dry if it meant a giggle could be had.

Dave has owned this Beetle – dubbed 'Felix' by a previous owner and the name has stuck – since 2007, but even that was 44 years after Felix was built, so what happened between 1963 and 2007? Dave: "I have the original log book that shows it was owned by Mr. Roy Schofield from 1963 to 1969, then Jack Schofield from 1969. In '73, registration was computerised and there's a big stamp saying 'cancelled' over it. I have a copy of the next registration document, which states it was sold in 1981, by Roy again, to a lady called Caroline O'Malley. She began writing a journal called 'Felix's Medical Record', in

>

On the road, Felix is a pleasure to drive. The stock 1200 engine and 'box potter the old girl along just fine, while subtle lowering means the car doesn't look like a 4x4

which she recorded everything that happened to the car during her ownership – every spark plug change, every accident and bump until it was uneconomical to keep on the road. She had it resprayed and tarted up a bit, but eventually it needed a full restoration so she sold it to a guy called Chris in '97. He bought the car with the intention of restoring it, so it was stored under a lean-to on a farm but, after 10 years, the owner of the farm told him he was moving and the car needed to go. Reality must have suddenly kicked in, because he 'phoned my mate Julian to see if he was interested in buying it. Julian sent me a picture of it in the field in the morning and I was on his drive looking at it that evening!

"Julian tried to get the car running, so put a battery on it, poured some petrol into the tank and it came straight out again all over his drive. The fuel lines had all perished. Also, when he pushed the accelerator pedal with his foot, the pedal went straight through the floor. We had a little conference on his drive. Could it be saved? Myself, Hayden and Julian decided it could, and that Felix was worth saving."

> "She recorded everything that happened to the car during her ownership"

So, just how bad was the car at the starting point? Hayden, as all who know him will attest, is nothing if not direct. "It was shit then. But, it's good now!" When pushed to elaborate further, Hayden continued. "It was a massive project, but Dave is a nutter and has an emotional attachment to Anthracite Beetles. We couldn't see it, but he saw a diamond. Here's Dave's side of the story: "A friend of mine owned an Anthracite '64 Beetle that he painted white and turned into a Herbie replica. I bought that as my first car. We used to go to the local VW Owners' Club GB meetings and shows in it, so I have fond memories of that car."

Sentimental attachment is a bugger, though, and has its own special way of clouding judgement and helping otherwise reasonable people make rash decisions. I should know… When asked what this car needed, both Dave and Hayden replied "Everything!" And they do mean everything, for not even the roof is original to this car. Being a '63, Dave's Beetle might have come with a Golde fabric sunroof, had the original owner specified one, but Felix wasn't even a sunroof car originally. Wanting that feeling, though, a donor section was grafted in from an even sorrier '64, while a 1303 gave up most of its sunroof mechanism to the cause.

### TECH INFO

**BODY:** Stock '63 Beetle, but with a steel sunroof section from a '64 grafted in. Paint: L469 Anthracite
**INTERIOR:** Handmade carpets and headlining by Delux VW Interiors
**ENGINE:** Stock original 1200cc
**SUSPENSION:** CSP adjusters in stock front beam; one-spline drop at the rear; stock shocks all round
**WHEELS AND TYRES:** Stock steels blasted and two-tone painted; 155 and 165 tyres

## New metal for old

The doors, bonnet, engine lid, floorpan halves and front clip are all replacement metal, too. All four bumper mounts came from Hooky's Panel Shop, as did the bottom plates for the replacement heater channels. Hooky's also supplied a pair of a-pillar bottoms and a duo of Hipacs, which were duly installed in the sides of the engine bay. The only glass fibre parts on the car are the rear wings, which were sourced from Day Mouldings. With the extensive body repair work done, Hayden repainted the body in its original colour of (L469) Anthacite.

The floorpan was delivered to Alex at ABS Blasting, before it spent some quality time with Mark at Perfect Coatings. When it came back, it was built back up to stock spec, albeit with a one spline drop at the rear and CSP adjusters in the front beam.

The car's original 1200cc engine was freshened up and bolted to the factory-fitted gearbox before the blasted and powder coated rims were rubbered up and rolled back into place. The only upgrade was a sensible one, which was to convert the car's electrical system to 12V. Drive a stock

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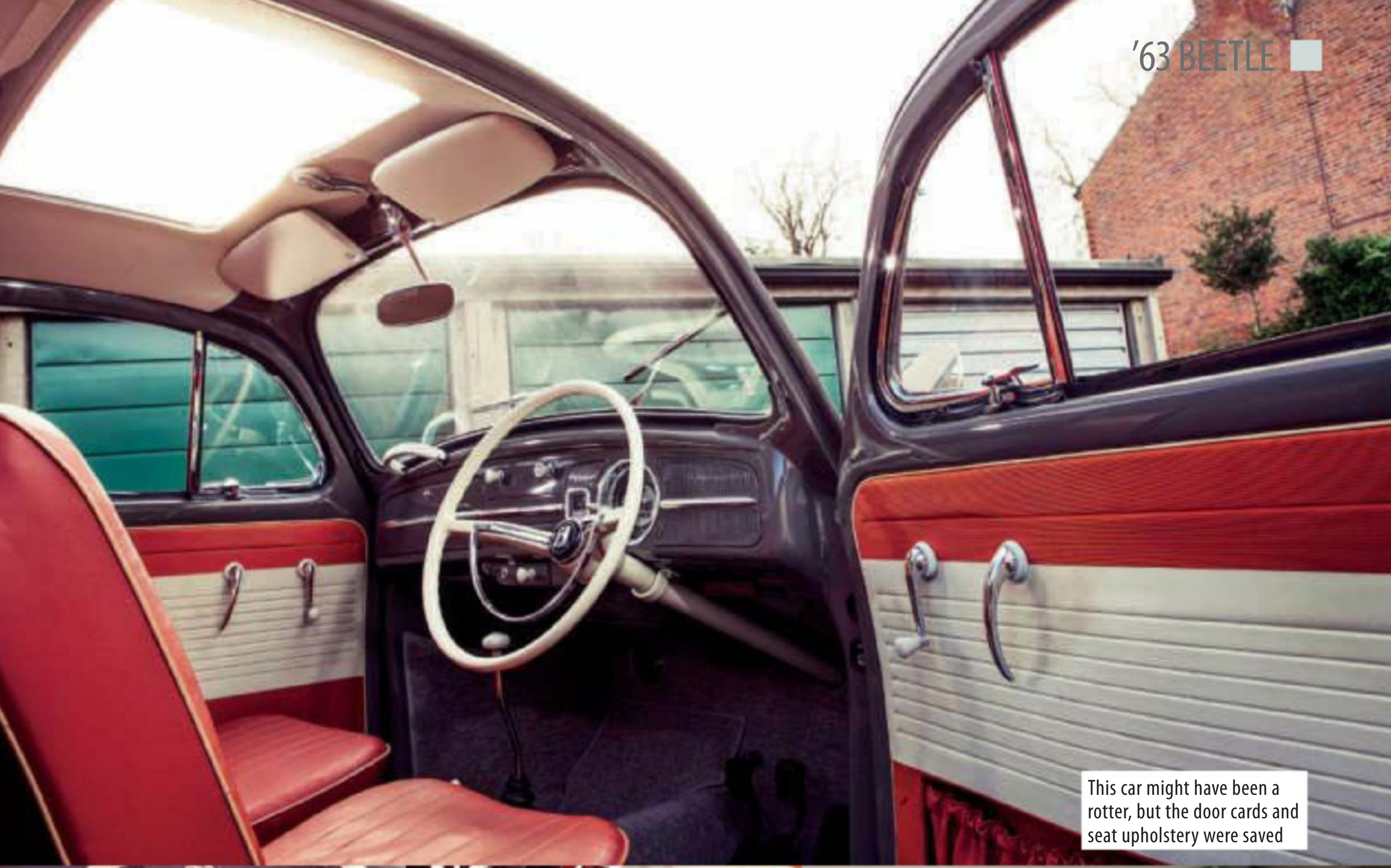
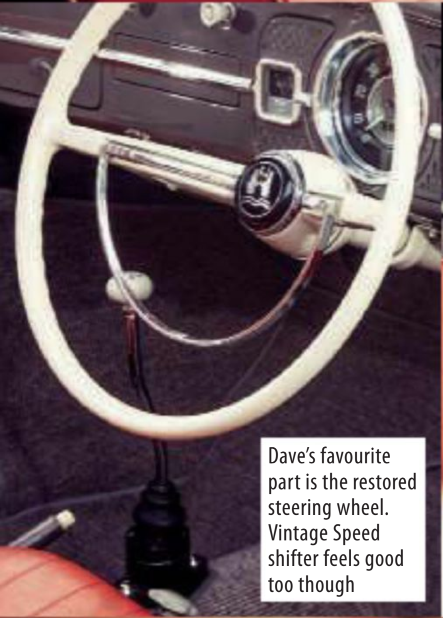
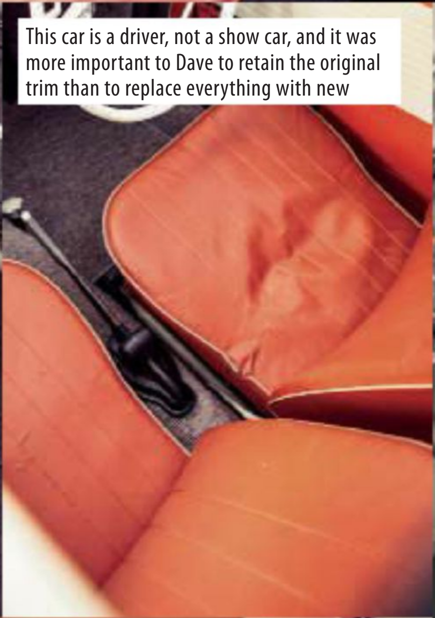


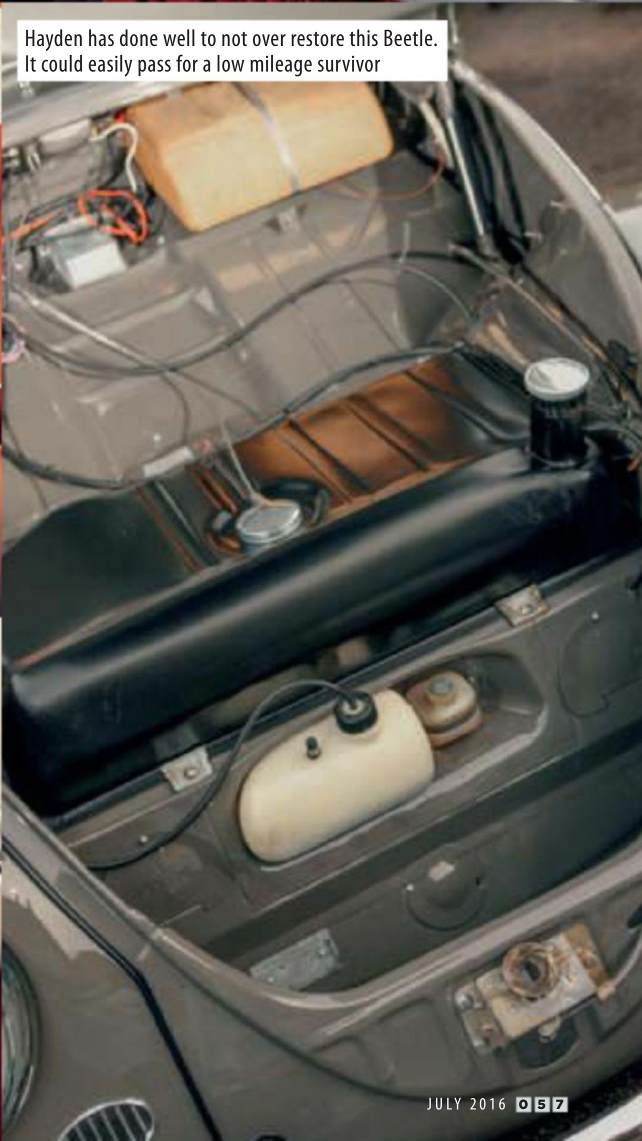
This car might have been a rotter, but the door cards and seat upholstery were saved



Dave's favourite part is the restored steering wheel. Vintage Speed shifter feels good too though



This car is a driver, not a show car, and it was more important to Dave to retain the original trim than to replace everything with new



Hayden has done well to not over restore this Beetle. It could easily pass for a low mileage survivor

New perforated headliner was made for the car by Delux VW Interiors, as were the carpets

6V Beetle and you'll realise why Dave did this.

With the body mounted back on the 'pan, work got underway on the interior. Believe it or not, the door cards and seat upholstery are all the originals, apart from the driver's seat bottom. The frames were stripped and repainted. Pete and Tim from Delux VW Interiors brought their skills to the party with handmade carpets and headliner, and it's the interior that Dave says is his favourite part: "I love the way the whole car has turned out, from the paint to the sunroof. The headliner and carpets are works of art, but I think the best part could actually be the steering wheel, now that it has been repaired and repainted. It's the part you hold to drive and it feels like new, which reminds me the whole car is pretty much like new now."

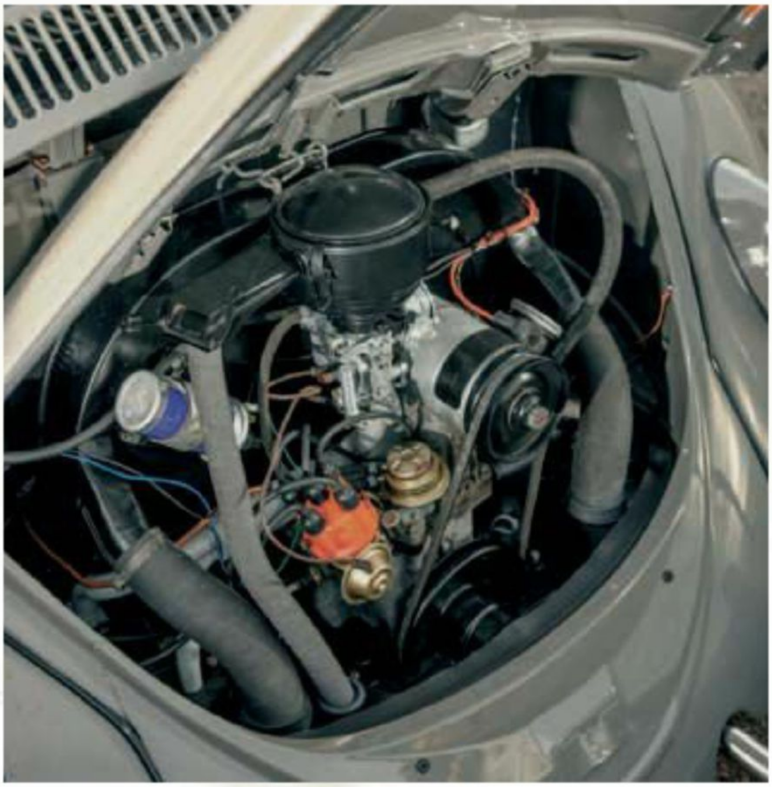
## Close to home

As with any restoration, sourcing parts is often the hardest part, especially if you gravitate towards older vehicles, but apart from buying most of the rubbers direct from Wolfsburg West in the USA, everything else was sourced close to home. The handles, pop-outs and indicators were either NOS or very good second hand units picked up from the swapmeets at Slough, Stonor and Stanford Hall.

At the start we suggested that this was not just a restoration of a Beetle, it was about three men and a Beetle, but really this is the story of three mates getting stuck in to make sure one of them ends up with his dream VW restored to the highest standard. We also mentioned that Hayden, Dave and Julian wouldn't hesitate to push either mate into the firing line of jokes, which is certainly true, but they're not exclusive, so anyone is fair game, myself included. Being an Irish guy made me a ready target when Dave's Beetle was displayed at The *VolksWorld* Show last year. It's all good fun, but I don't think they realise they're actually sloppy devils, pouring their hearts out to me like teenage Bieber fans. Here's what Julian said of 'Dave the Nutter', as he calls him: "He's a top bloke, a really good guy, who would do anything for you." While Mr. Tough himself, Hayden, went all girl's blouse in his description: "Dave's just one of those guys who you meet and you immediately know he hasn't got a bad bone in his body. He's just a really nice guy." Time for a group hug boys, and a high five all round for finding and building a sweet, useable classic VW and making a good friend happy. ■

Dave's at his happiest behind the wheel, and we can see why. Top job one and all!

"A useable car I can get in and drive wherever, whenever"



While the original 1200 remains trouble free it will stay put, but Dave says he'd like to go for a big motor eventually, which is why a pair of Hooky's HiPacs were installed in preparation

## BEHIND THE WHEEL

I've driven a couple of low mileage Beetles before and this is just as good. The engine pulls well enough, and the gears are still really positive. I love the suspension set upas it doesn't look like an old buffer's car, yet I can easily go over speed bumps. The interior is a very pleasant place to be. I love the fact the seats and door panels are the originals, while the new headliner and carpet make it feel really nice around me.

It's just gone through its second MoT, and I calculated the mileage. I've done 4,500 miles since The *VolksWorld* Show last year without any issues. That's exactly what I wanted from this car – a useable car I can get in and drive wherever, whenever. This car is exactly that.

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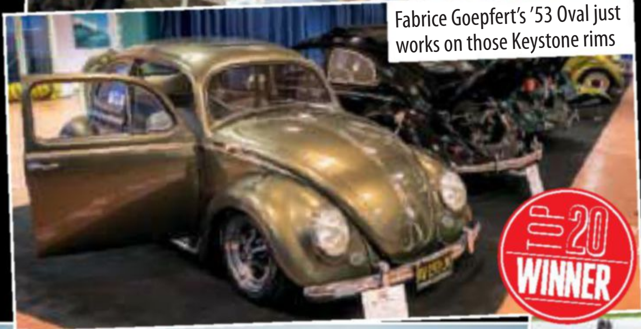


Fabrice Goepfert's '53 Oval just works on those Keystone rims

The campsite is a show in itself, and well worth a mooch

2016, the year of Cal Look, again? Maybe…

# The *VolksWorld* Show

## That's it for another year. The big one. Sandown Park and all that jazz. Here's how it all went down

**Words** James Peene **Photos** Dan Pullen

If there's one thing I'll take away from this year's show it's how amazing all the cars were. And, if there's a second thing, it's how much effort everyone makes to be there / have their car at our show.

You know as well as I do that it's the people that make our scene what it is. I'm not being schmaltzy here, but it's true. It's the people involved in our hobby who build the cars, the people who dedicate their working lives to restoring them, making and selling parts for them and for getting off their arses and driving to shows up and down the country in them.

Without everyone who comes to the show, who is into the show and understands what it is, there would be no show. So, thank you one and all for making 2016 an especially fabulous gathering of cars and like-minded people.

I have to say, I think 2016 witnessed something of a Cal Look revival. There seemed to be more nose down, arse up, big-motored cars than I can remember for any number of years.

Are we about to see a move away from patina and a Cal Look reawakening? Not if the clubs area is to be believed, it was heaving with slammed and gnarly VWs of shapes and sizes. There was also a Porsche line up and, perhaps a little controversially, an increased water-cooled presence in the form of a larger parking area for our sister magazine, *VWt*.

I for one thought the inclusion of some top notch water-cooled Transporters brought a new element to the show and hope we continue to attract the very best VWs to Sandown Park, whatever type they may be. Outside at least.

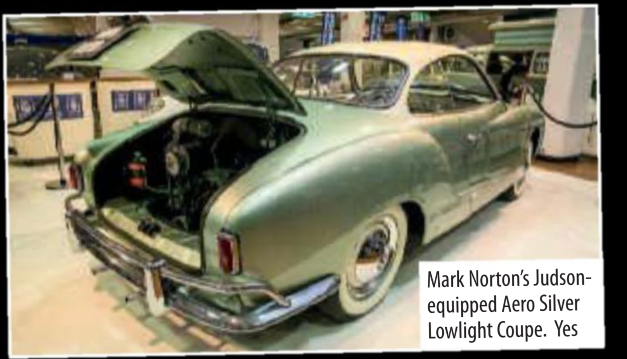
### Air we go

Inside, as ever, it was air-cooled all the way, and there were more traders than you could shake a stick at, selling everything from jelly sweets to recently imported Brazilian automobiles. Basically, if you can't find it at The *VolksWorld* Show, you're unlikely to find it anywhere.

Once again, my favourite element of the show was the swapmeet, tucked away upstairs. There were literally tons of bits and pieces I could have bought, had I the funds and the cars to fit them to.

Roll on 2017 for more of the same. ■

Air and water, together in perfect harmony, on the Red Brick area at least



Mark Norton's Judson-equipped Aero Silver Lowlight Coupe. Yes

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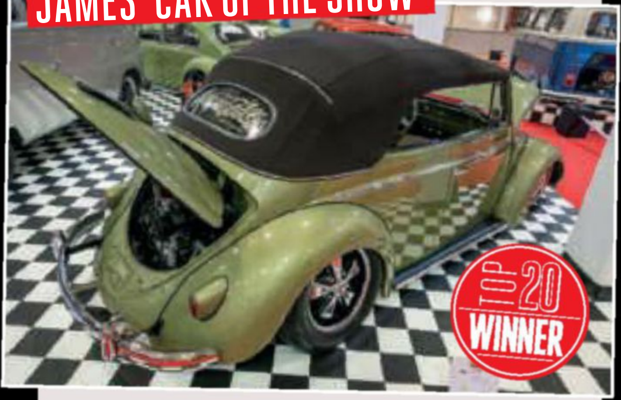
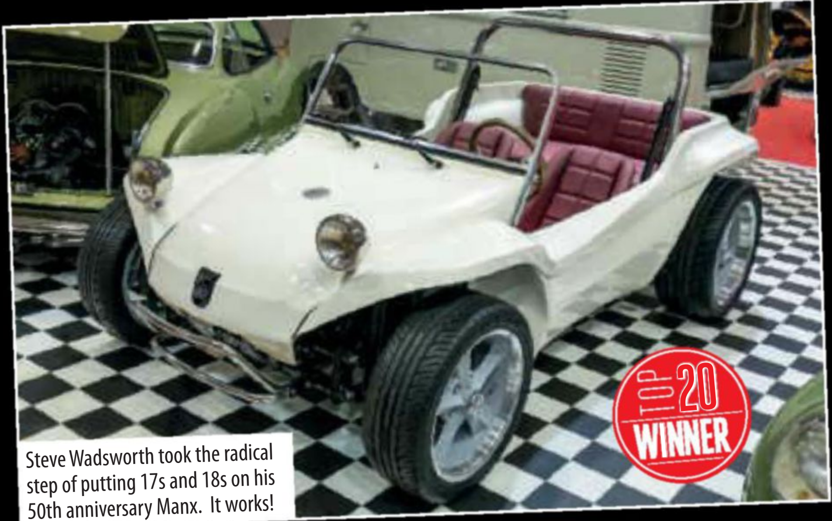
## JAMES' CAR OF THE SHOW

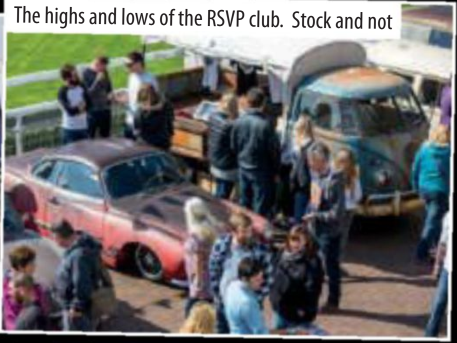


As I said whilst I was handing out the awards, Steve Lawrie's Almond Green '58 Cabriolet is the car I'd have taken home from this year's show. Had I been able to prize the key from his cold, dead hand, that is! There is no single element I like more than any other, but it's the car as a package that works for me. The colour is awesome, I love the stance achieved by the Airkewld air ride set up, and genuine 4.5 and 6-inch Fuchs are always a winner in my book. Peep beyond the roof and you'll spot a truly fabulous West Coast Classic VW interior. Little wonder it's the latest car to be awarded a window by The German Folks. Top work Loz. ■



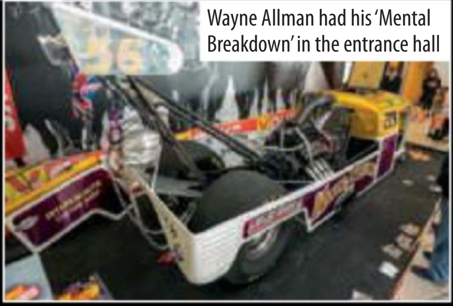
Steve Wadsworth took the radical step of putting 17s and 18s on his 50th anniversary Manx. It works!

Good to see the Abbott Van out and about at last



The highs and lows of the RSVP club. Stock and not

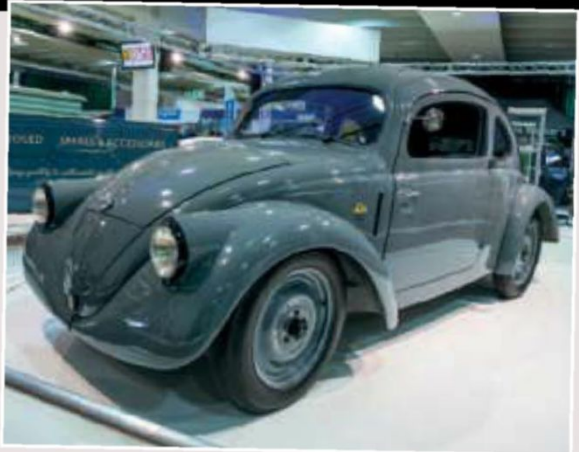
Etienne and Jasmine Bleich's '59 Cab on Steiner Rads



Wayne Allman had his 'Mental Breakdown' in the entrance hall

## MIKE'S CAR OF THE SHOW

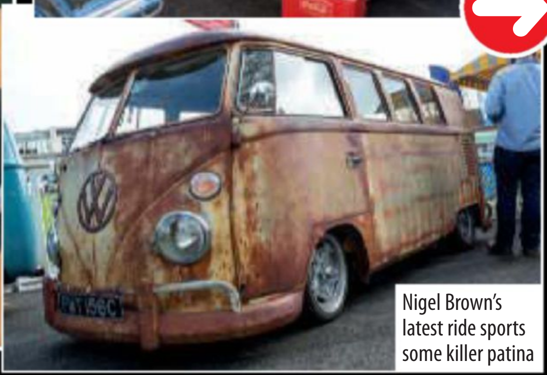
Throughout Friday I had been pondering this, but couldn't settle on one car in particular. Until Barney Dines, MD at VW Heritage, tossed me the keys to the D'leteren V30 replica they brought over for the show and said, "You can drive it." These sort of opportunitites don't come along very often, so I jumped in. Okay, so it's a handbuilt replica of the 1937 pre-production prototype (no complete originals exist), and some say it's ugly, but I think the shapes in the rear end and roof are exquisite. With no rear window, only louvres, it's bizarre to drive, but what an experience. And no, I wouldn't slam it on earlies, though I might put some fatter rubber on it. ■



TOP 20
WINNER
BUGS VW

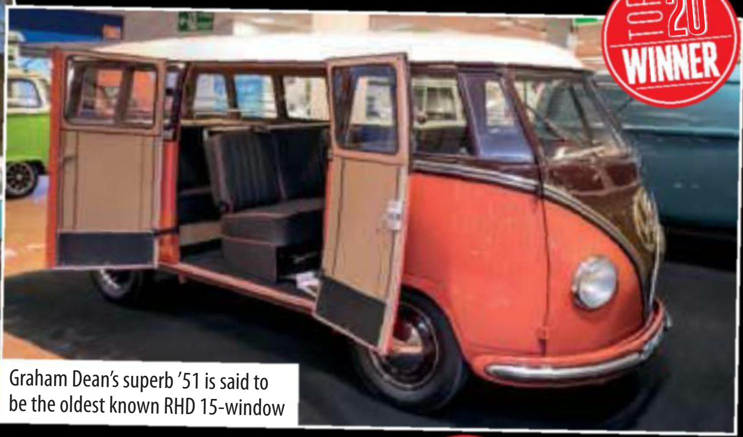
Kenneth Anno's '61 Cal Looker is painted in a Porsche yellow with a jar of mustard thrown in the mix. Yum yum

Period perfect camping set up. We love a Westfalia



Nigel Brown's latest ride sports some killer patina

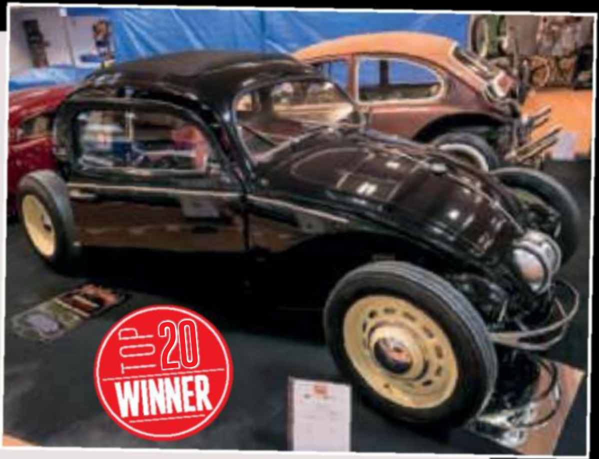
Brazilian Bay, Late Bay and Type 2 Owners' Club enjoying the sunny weather



Graham Dean's superb '51 is said to be the oldest known RHD 15-window

## STEVE'S CAR OF THE SHOW

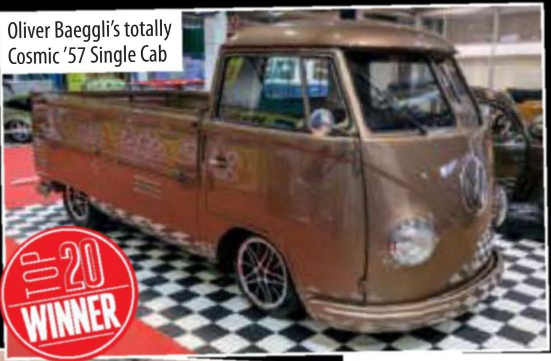
**Mark Bailey's, The Paintbox-built 'Rat Catcher' is a car that's always worked for me. It might surprise you to hear it's 11 years old now. If you don't recognise it, that's because in its previous guise it was in lacquered bare metal. It had stood up surprisingly well to the ravages of the British weather, especially as Mark hasn't been scared of driving it, but to me it always deserved a full paint job. As I said to Mark on the Friday of the show, 'If you'd told me you were painting it black, I'd have had my doubts'. But how good does it look? Classic hot rod through and through. Black, with an oxblood red interior and cream wheels, E&J headlights, Moon tank, crossplies, steels… it's all there, and in my opinion it adds up to one of the best Volksrods ever built.** ■

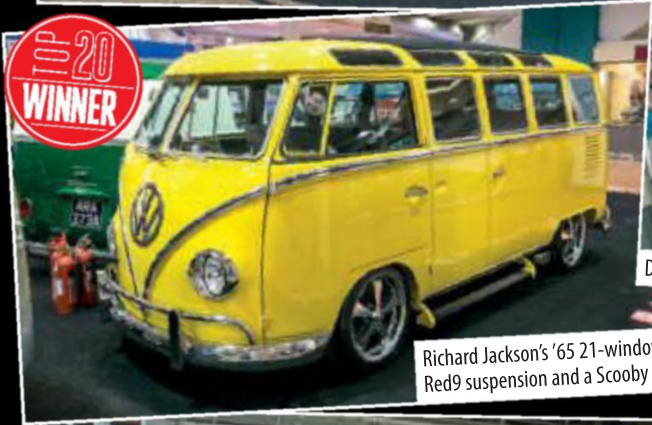


TOP 20 WINNER

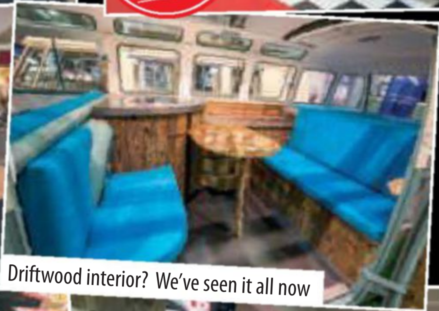
Rothfink stand was one of the many attractions on the grandstand apron

Oliver Baeggli's totally Cosmic '57 Single Cab



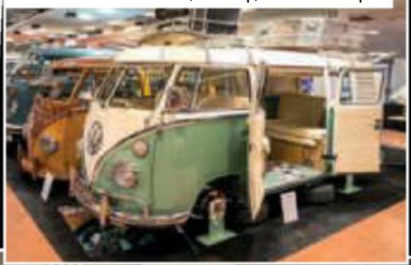


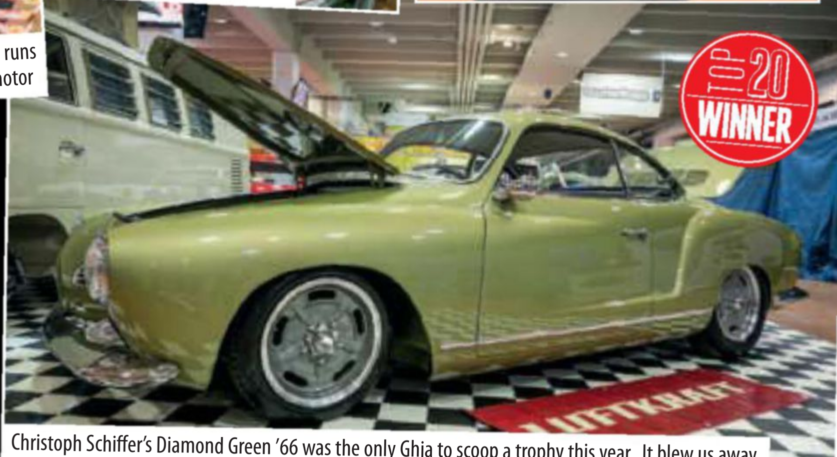
Richard Jackson's '65 21-window runs Red9 suspension and a Scooby motor



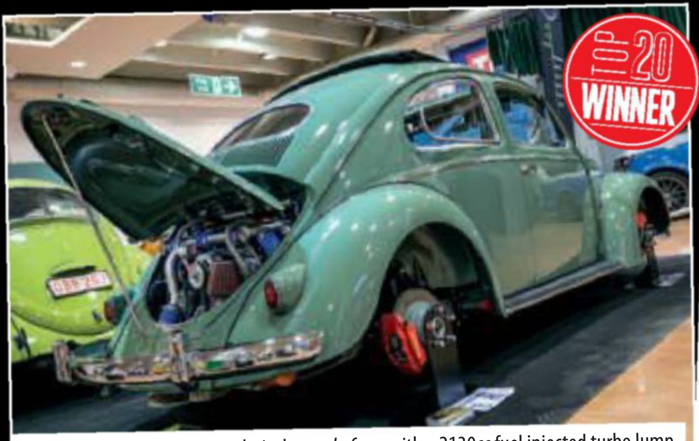
Driftwood interior? We've seen it all now

Gavin Stafford's 2.4-litre, 140bhp, '65 Sundial Split



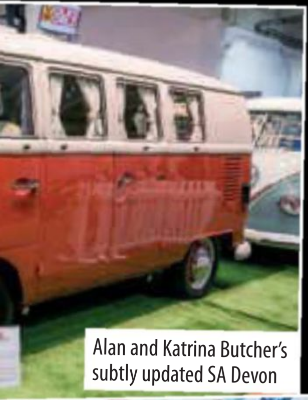


Christoph Schiffer's Diamond Green '66 was the only Ghia to scoop a trophy this year. It blew us away

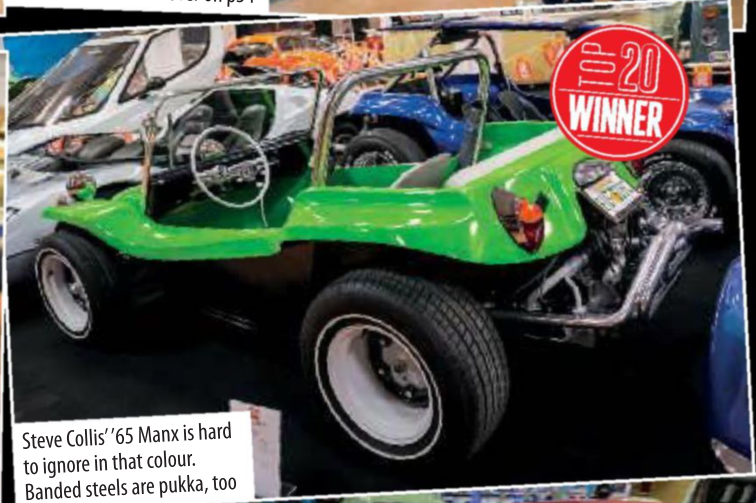


Adam Nash's Agave '56 is a technical *tour de force* with a 2130cc fuel injected turbo lump

Like these Brazsilain oddities? Read all about them over on p34



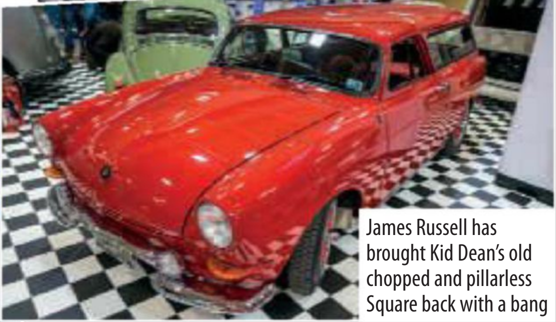
Alan and Katrina Butcher's subtly updated SA Devon



Steve Collis' '65 Manx is hard to ignore in that colour. Banded steels are pukka, too

Mike Birch's slammed 1500 Notch on NSU rims totally rocks. Love it

Retro Restoration & Performance German Look '75



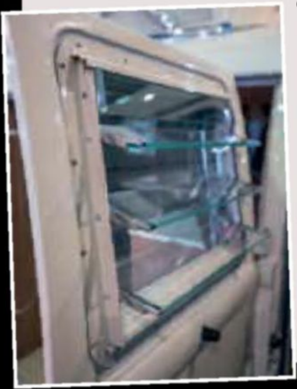
James Russell has brought Kid Dean's old chopped and pillarless Square back with a bang

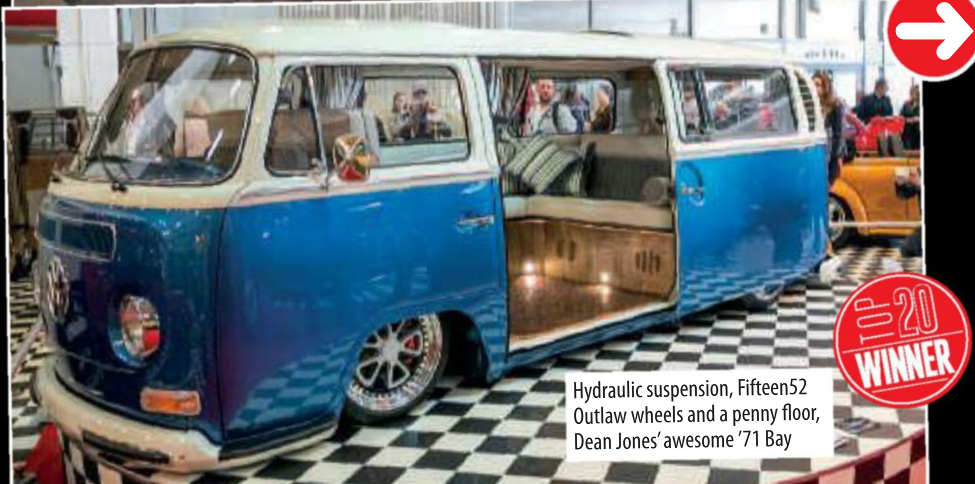
Stock, Resto Cal, Cal Look, we dig them all

Porsche line up was a new addition for 2016

## MATT'S CAR OF THE SHOW

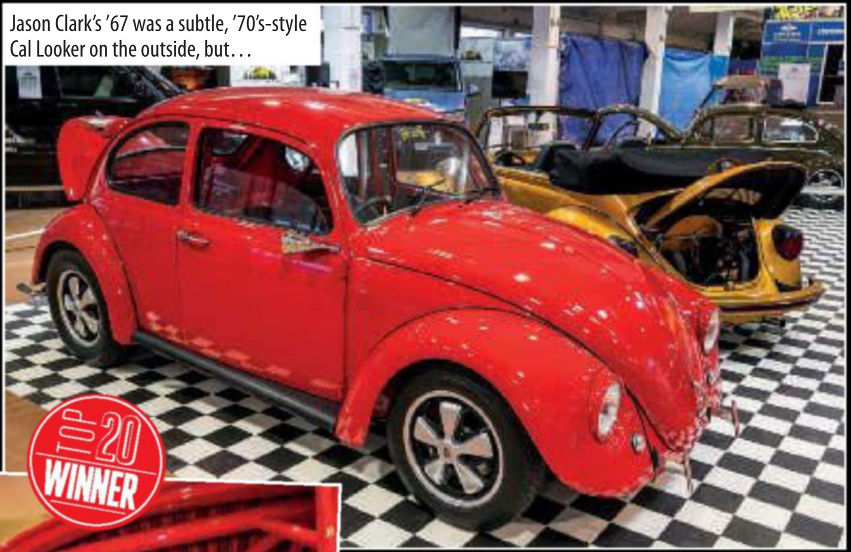
**The first time I set my eyes on Audrey Mauleau's Westy, my Bus radar started blipping wildly. It immediately grabbed my attention, but being busy all weekend I had to drip-feed myself its finer details over the course of the show. However, each time I returned to visit the Bus, I was duly rewarded with quality and quantity in equal amounts. Now there's detail and there's detail, and this Bus literally stole the show for me with its attention to even the most insignificant and obscurely located component. If had to pick a single point on the Westy that really blew me away, it would be the louvred side windows. The sheer lunacy of detail that went into these alone fried my brain. Every single component had been stripped, polished or chromed to a perfect lustre and reassembled to way beyond factory quality. A worthy Best of Show if ever there was one ■**



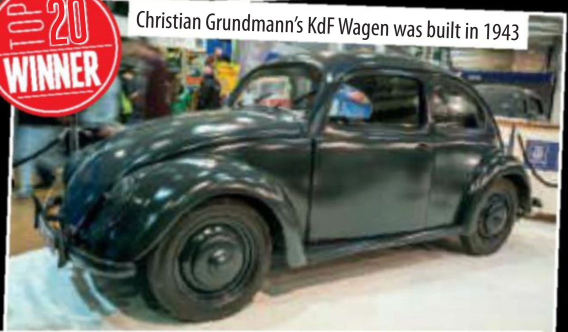


Hydraulic suspension, Fifteen52 Outlaw wheels and a penny floor, Dean Jones' awesome '71 Bay

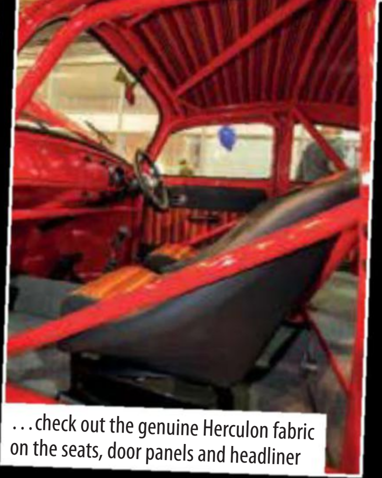
Every year we're blown away by the amount of effort all the clubs put into their displays. Thank you, one and all



Jason Clark's '67 was a subtle, '70's-style Cal Looker on the outside, but…



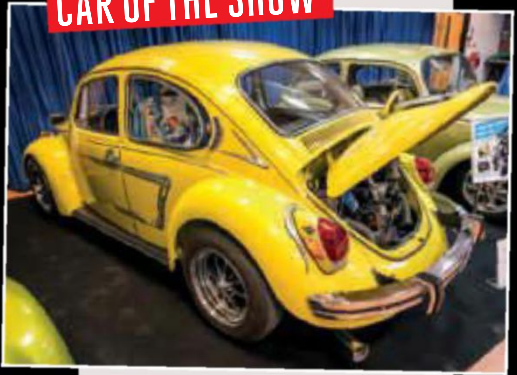
Christian Grundmann's KdF Wagen was built in 1943



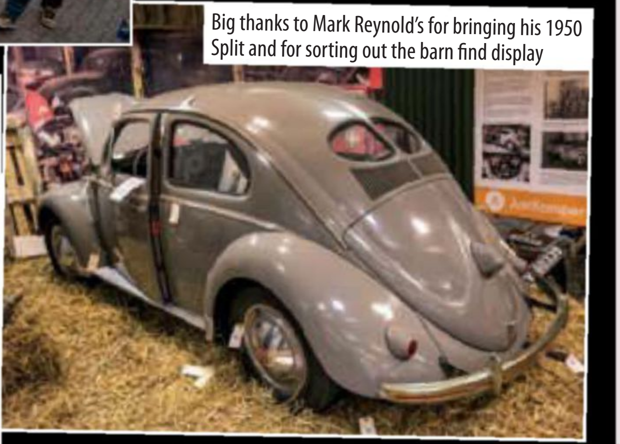
…check out the genuine Herculon fabric on the seats, door panels and headliner

We're just going to say it, we love a bit of German sausage. Delicious!

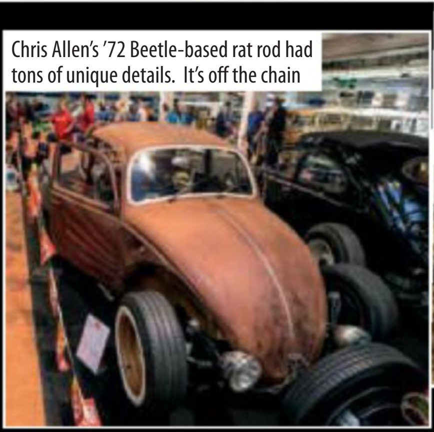
## LAWRENCE'S CAR OF THE SHOW



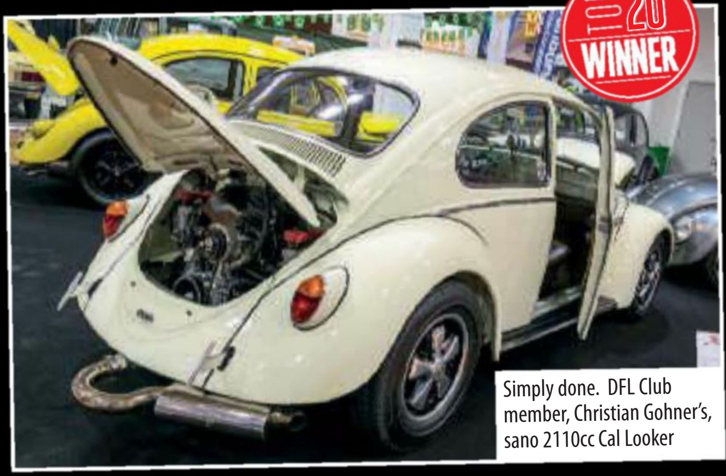
My car of the show would have to be Nigel Fleet's original EMPI GTV Beetle. I normally like my cars to be a bit faster and more race orientated and, let's face it, the GTV was more about looks than performance, but this period special just did it all for me. A dealer option from Economotors (Joe Vittone's VW dealership in Riverside, California), it was not very well received by the bods at VW, who didn't think there was a market for a hot Type 1. How wrong were they? It was very well received at the show, especially when people saw the photos of how much accident repair work this '72 needed. ■



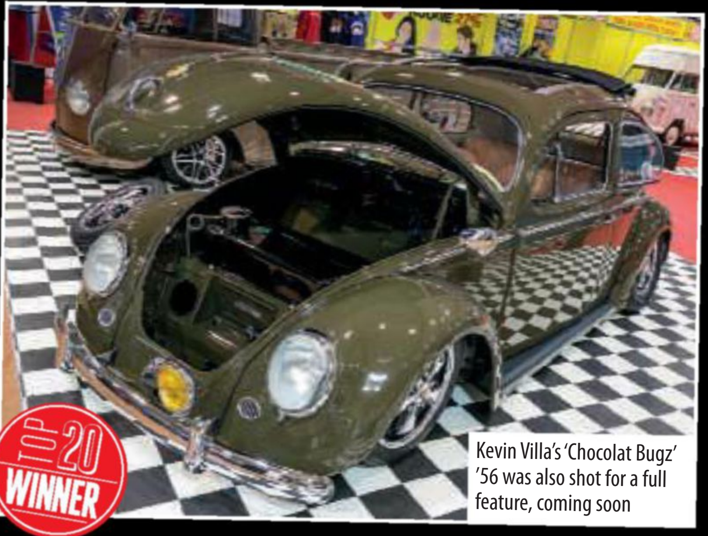
Big thanks to Mark Reynold's for bringing his 1950 Split and for sorting out the barn find display



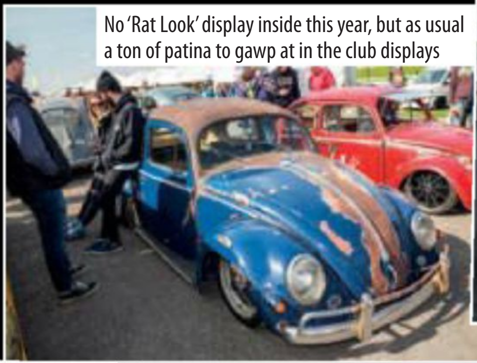
Chris Allen's '72 Beetle-based rat rod had tons of unique details. It's off the chain



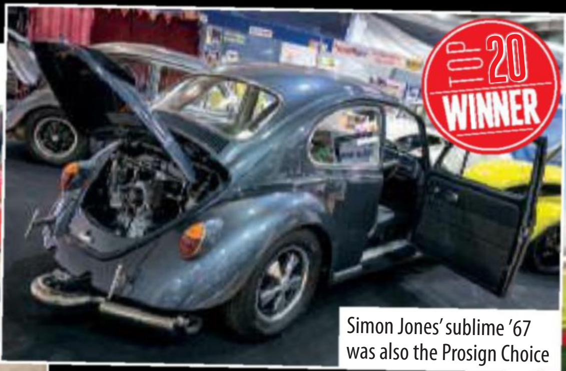
Simply done. DFL Club member, Christian Gohner's, sano 2110cc Cal Looker



Kevin Villa's 'Chocolat Bugz' '56 was also shot for a full feature, coming soon



No 'Rat Look' display inside this year, but as usual a ton of patina to gawp at in the club displays



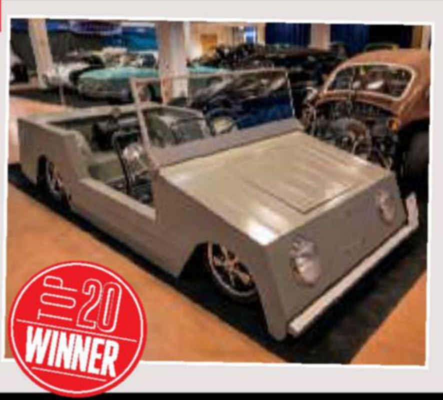
Simon Jones' sublime '67 was also the Prosign Choice

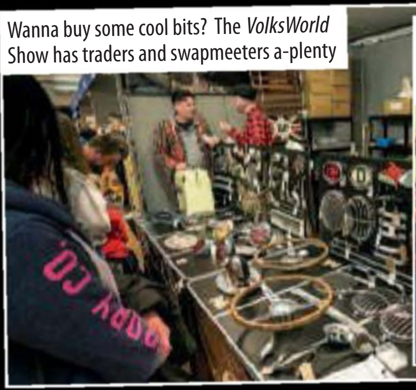
Turret Top looks a bit draughty in this old Westy, but the owner looks happy all the same

Symmr Singh Sandhu's 3.2-litre Porsche-powered '75 Fleetline also runs a 915 5-speed and six Porker seats

## IVAN'S CAR OF THE SHOW

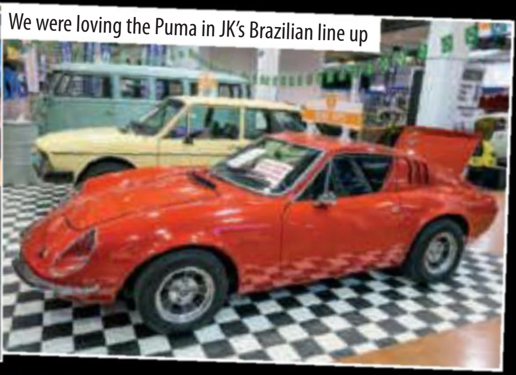
**Lloyd Jackson's Country Buggy is my choice, because the really great thing about it is that it isn't a Country Buggy at all. Lloyd built the entire body from scratch to show off his fabrication skills. He reckons it's actually harder to make a totally flat panel than a curved one, and that's why he decided to make this. It's just a shame he couldn't make his mind up about the colour, as Spike's Vintage Restorations ended up painting the car twice (!) the week before the show. Madness, and we love it for that.** ■





Wanna buy some cool bits? The *VolksWorld* Show has traders and swapmeeters a-plenty

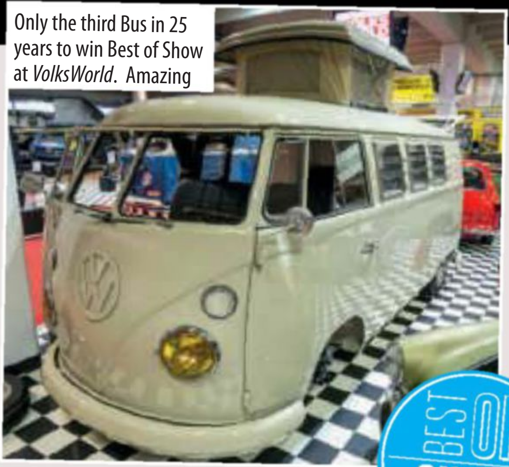
Sebastian Defrenne's 1915cc turbo bug on genuine Rivieras



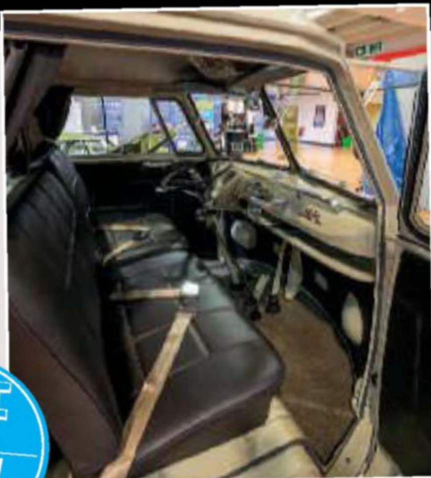
We were loving the Puma in JK's Brazilian line up

## BEST OF SHOW

**The quality of cars on display at the show beggars belief, and judging is taken so seriously that we have our team of dedicated judges poring over the contenders for most of the weekend. There were a couple of vehicles in very close contention for Best of Show this year, but the one that scored the highest on the judges' score sheets, and garnered the most amount of praise, was Audrey Mauleau's simply stunning SO42. It takes a heck of a lot of work to restore any vehicle to this sort of condition, but it takes even more when the vehicle in question is a pop-top Bus. If only because of the sheer size of one, never mind the insane level of detail that was everywhere you looked on this Split. One of our judges, a *bona fide* Bus fiend, summed it up perfectly when he said, "The only fault? I found a little smear of polish in the inner door edge. That's it. It's truly the best pop-top Westy I've ever seen."** ■



Only the third Bus in 25 years to win Best of Show at *VolksWorld*. Amazing



Foxon Park
Foxon Park
all-ways in good taste!

Chris and Sharon Smith's super slammed (on Rayvern hydraulic suspension) Foxon Park Panel Van. Just too cool

TOP 20
WINNER

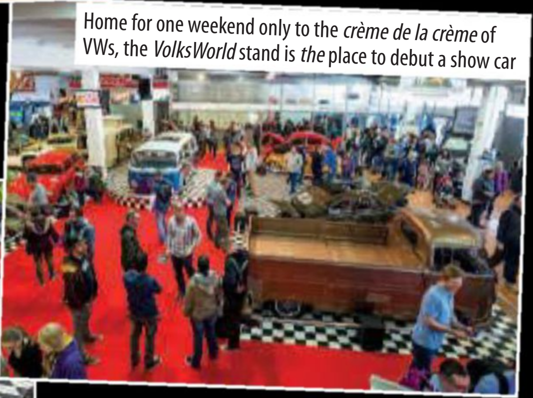
Apparently, Benoit Lanthier's Anthracite '63 Notch goes as well as it looks

BUGS VW
POWERHAUS
PAINTS

Andy Morgan's monster-engined race Panel Van

## MARK'S CAR OF THE SHOW

**When the show set up was finished late on Friday evening, and we did a walk around, I was completely blown away. Lloyd Jackson's Country Buggy replica was off the scale, but I was equally amazed by Graham Dean's 1951 15-window. The last time I saw that Bus, it was owned by my friend, Chris Hull, and was in a very sorry state. Another close contender for me was Nigel Fleet's original EMPI GTV Bug. I'm sure a lot of people assumed it was just another replica, but it is the real thing, wearing a lot of original paint and teaming with original EMPI parts. The real winner for me, though, was Paul DeGroot's black Split Beetle. It is a very stylish car, with a lot of rare parts and Paul drives it hard on a regular basis, with the family in tow. An all-round awesome car.** ■



Home for one weekend only to the *crème de la crème* of VWs, the *VolksWorld* stand is *the* place to debut a show car

Extortionate show food or cook your own?

Craig Shaw / Limebug's Reed Green '67 on air and Titanio Venus wheels

Paul and Mark Stephens' '71 is a proper full-on custom

Chillin', illin' but definitely no beer spillin'

Love the interior in Kevin Burns' 11-window

Start 'em young and they'll be hooked for life. Polishing mum and dad's Razor Edge

Full feature coming soon on Dave Anderson's '55

Vintage sounds from the Hotsy Totsys

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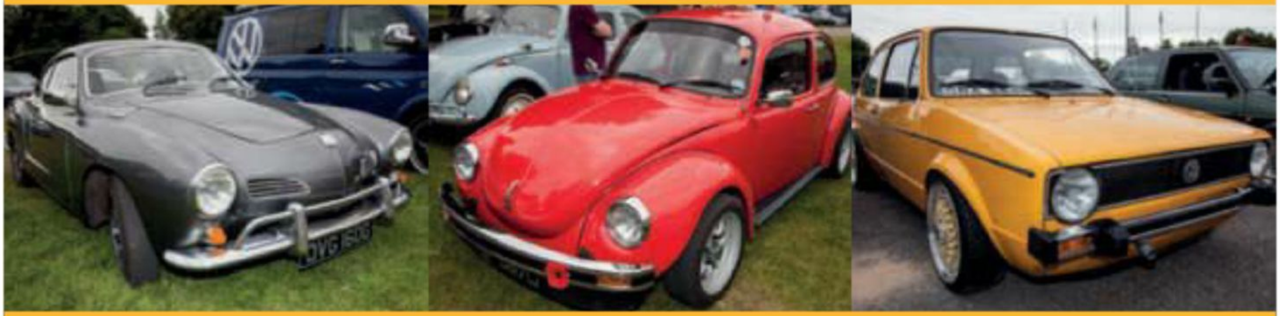

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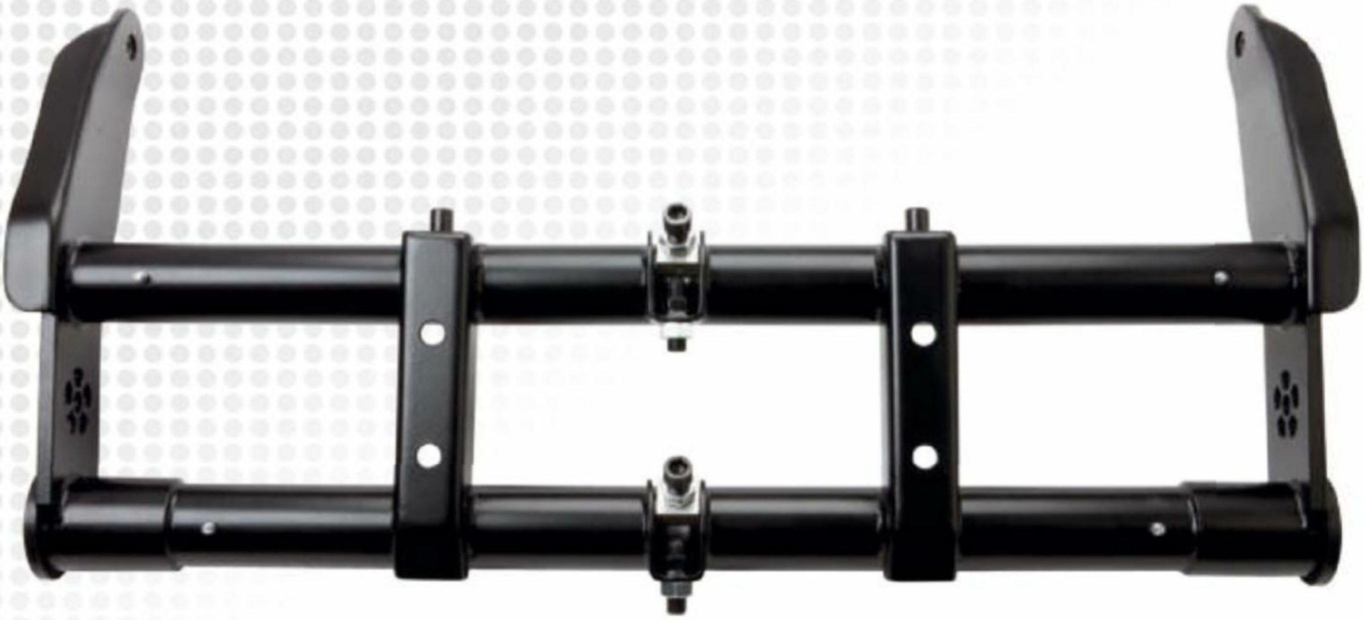


Above is a 4-inch narrowed balljoint beam with Delrin bushes and reinforced shock towers (intended for use with air shocks)

# The lowdown

## Seems everyone these days wants to go low and narrow, but here's what to consider before spending any money

**Words** Mike Birch **Photos** *VolksWorld* archive **CAD drawings** Aire Valley Speed Shop www.airevalleyspeedshop.co.uk

Pick up any magazine, trawl 'Instabrag' or talk to somebody in a field of VWs and the topic of lowered cars and narrowed beams will crop up sooner of later. If you're new to the air-cooled scene and are confused by all this, we're here to explain. After all, you can either be a fool for a minute or a fool for a lifetime.

## How does a VW work?

Air-cooled Beetles (with the exception of MacPherson strut-equipped 1302 / 1303 models), Karmann Ghias and Type 2 Buses all left the factory equipped with torsion beam front suspension. Though the principal is similar, to avoid technical overload we'll ignore Type 3s for now. In the VW design, trailing arms act upon two transverse packs of spring steel bars (or leaf packs), located within the upper and lower tubes of the front beam axle. The centre of each leaf pack is pinned in a fixed position relative to its respective tube and, when the trailing arms are rotated by the suspension being loaded ie going over a bump, the leaf packs resist the rotational effect and return the trailing arms to their resting position. The result being a rotary spring, which in the VW's case acts as the car's suspension.

So what do we mean by lowering and narrowing? Lowering is achieved by changing the resting position of the fixed centre of the leaf pack by rotating it relative to the beam's vertical axis. This has the effect of changing the starting point at which the suspension supports the vehicle's weight, which in turn lowers the ride height.

Narrowing is achieved by using a front beam assembly that is shorter in overall width than standard. This brings the trailing arms inboard and reduce the front track (the distance between the centre line of the front wheels).

So, a narrowed and adjustable beam would be a torsion beam with a narrowed track, adjustable centre position and ride height. You follow?

## Why would anyone do this?

Despite what you may have heard, lowering and narrowing your VW will not instantly make you more attractive to members of the opposite /same sex or enable you to use catchy stance-related phrases / clothing / stickers without fear of reprisal.

It will, however, dramatically change the aesthetics of your VW, allow you to lower it further without the tyres hitting the wheelarch lip and perhaps help you fit some aftermarket wheels, brakes and / or dropped spindles (again, more on these later) without widening the track beyond where you want it.

Make no mistake, the majority of people lower and narrow their VWs for aesthetic reasons. I myself am guilty of this, as I just dig the way a VW looks with the front wheels tucked into the 'arches, accentuating some lines, removing others.

Like all good modifications, it's not for everybody, and there are a number of issues and compromises to consider should you wish to go down this route, so the purpose of this feature is to arm you with the

If the manufacturer of your chosen beam has gone to the trouble and expense of productiing CAD drawings, you know you are dealing with a quality product that's been properly thought through

information you'll need before embarking down this path.

Let's start with wheels. Fitting a set of aftermarket wheels is one of the biggest things to change the look of a vehicle, hence the phrase 'wheels maketh the ride'. If the wheels you want to fit require the use of adaptors, or are wider than the factory wheels with larger offsets, you can easily push the front track out to a point where the tyre is actually beyond the wheelarch (wing in VW speak) lip. This can result in the front tyres scrubbing / damaging the 'arches, causing damage to the tyre and bodywork and generally making your new wheel choice rapidly seem like a bad idea. If you also want to lower your car, you have just exacerbated the problem as the tyre now sits beneath the lip of the wheelarch. Fitting a narrowed beam will pull the front track width back in and give you the clearance you need.

If you're running a big engine / like to drive more enthusiastically than a well-adjusted set of drum brakes will allow, you might like to uprate your brakes to aftermarket discs. That's all well and good for improving your stopping power but, depending on which ones you choose, can alter the front track. The result is similar to fitting aftermarket wheels, albeit usually to a lesser degree.

Dropped spindles will do the same. If you are planning on lowering your VW just a touch without modifying or buying a new beam, you'll be looking to fit dropped spindles (flipped spindles in the case of Split Screen Buses, although these don't affect track width). These re-manufactured stub axles move the axle centre line up relative to the trailing arm mounting points, meaning the wheel centre moves up in relation to the beam, lowering the front of the vehicle. With no other modifications, dropped spindles retain the stock suspension characteristics, and have minimal effect on steering geometry. The compromises here are some versions available increase the track by up to an inch per side, and all only offer minimal lowering (usually about 2-3in).

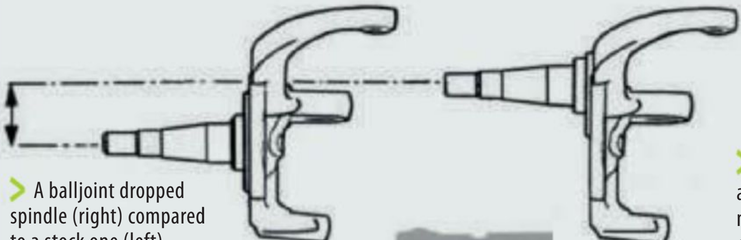
> "The majority of people lower and narrow their VWs for aesthetic reasons"

## The whole picture

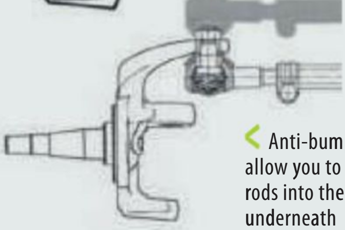
All of the above explain some of the mechanical reasoning behind installing a narrowed, adjustable beam. As you can already see, it's important to consider the suspension as a whole before you dive in and start buying parts. If you're looking to make more significant changes, you're probably going to fit all of the above, in which case you still have some work to do.

So you've decided you 'need' a narrowed beam, you've worked out what wheels, brakes and spindles you'll be fitting, how you want the vehicle to look and what ride height you want it to end up at. It's now a case of choosing how narrow a narrowed beam you need.

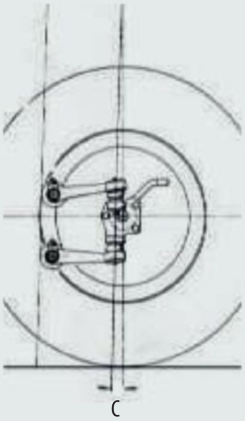
## TERMINOLOGY EXPLAINED



A balljoint dropped spindle (right) compared to a stock one (left). Expect a 2-2.5-inch drop using a pair of these



Anti-bump steer bushes allow you to fit the track rods into the spindles from underneath



C = caster angle. The more the front end is lowered, the less this angle becomes

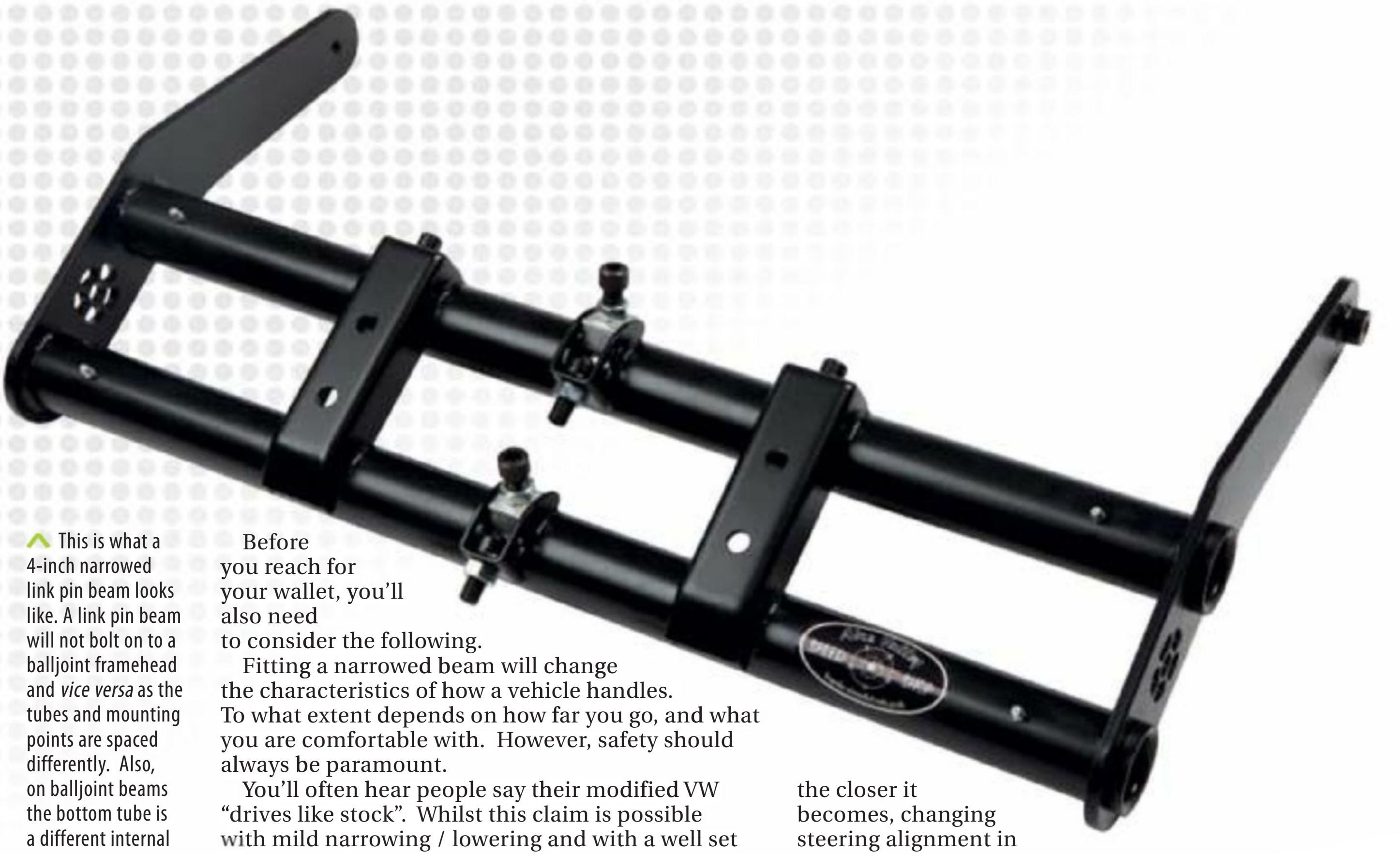
## LIVING LOW

If, like a lot of people these days, you've lowered your VW a lot, you'll find this creates a number of real world problems.

These problems occur on a progressive scale the lower you go, so don't worry too much about a small drop, but be prepared if you are making big changes.

Take from this what you will. I have personal experience in the following:

- Got beached on the floorpan and had to get out and push the car off with help from passers-by.
- Hit a dip in the road and had a pedestrian dive for cover from the resulting noise.
- Had to create an 8ft long see saw from planks to get my car into a garage to do the tracking.
- Have to carry homemade wooden ramps with me at all times to get the car onto a jack.
- Cracked a front wing hitting a speed bump.
- Had to reverse backwards down a street due to inability to traverse speed bumps.
- Buckled the rear 'pan halves.
- Had to listen to a recovery driver rant for 10 minutes about how "that will never get on here" despite specifically asking for a truck suitable for a low car. Then had him repeat for the rant for the length of the journey...



This is what a 4-inch narrowed link pin beam looks like. A link pin beam will not bolt on to a balljoint framehead and *vice versa* as the tubes and mounting points are spaced differently. Also, on balljoint beams the bottom tube is a different internal diameter. Compare this photo with the one of the previous spread to see the differences

Before you reach for your wallet, you'll also need to consider the following.

Fitting a narrowed beam will change the characteristics of how a vehicle handles. To what extent depends on how far you go, and what you are comfortable with. However, safety should always be paramount.

You'll often hear people say their modified VW "drives like stock". Whilst this claim is possible with mild narrowing / lowering and with a well set up beam / steering geometry, the key word here is 'like'. 'Driveable' is probably more appropriate, and accurate, in terms of what's achievable with more severe changes in width and ride height.

Let's look more closely at the case of an otherwise stock Beetle with a beam that is narrowed two inches per side (commonly referred to as a 4-inch beam) as this is a fairly common 'mild' set up. The wheels are now two inches closer to the inner wing either side. The effect is a reduced turning circle and the possibility of the tyres fouling on the inner wings at full lock. Steering stops can be used to prevent this, but that will only reduce your steering lock further. This is the only negative, so far.

## A little or a lot?

For most people that are interested in this sort of modification, the above case will not offer the look they are after. And so the compromises increase… On a Type 1-based king and link or balljoint beam, the steering box is positioned on the driver's side of the beam, clamped to the upper tube. This requires unequal length tie rods for the steering to function. When lowering such a vehicle, the tie rod end at the spindle is moved up relative to the steering box so it is now at an upwards angle at rest when viewed from the front of the car, as opposed to the close to horizontal position it assumes in a standard height suspension. The shorter tie rod will sit at a more severe angle due to its shorter overall length. As the tie rods are fixed length, when the suspension is compressed the spindle moves up and the tie rod describes an arc, pulling the outer tie rod end at the spindle closer to the centre of the steering box. The greater the angle, the closer it becomes, changing steering alignment in the process. This is called bump steer. The shorter the tie rod, the greater the angle of the tie rod for a given suspension drop and the greater the change imposed on the steering.

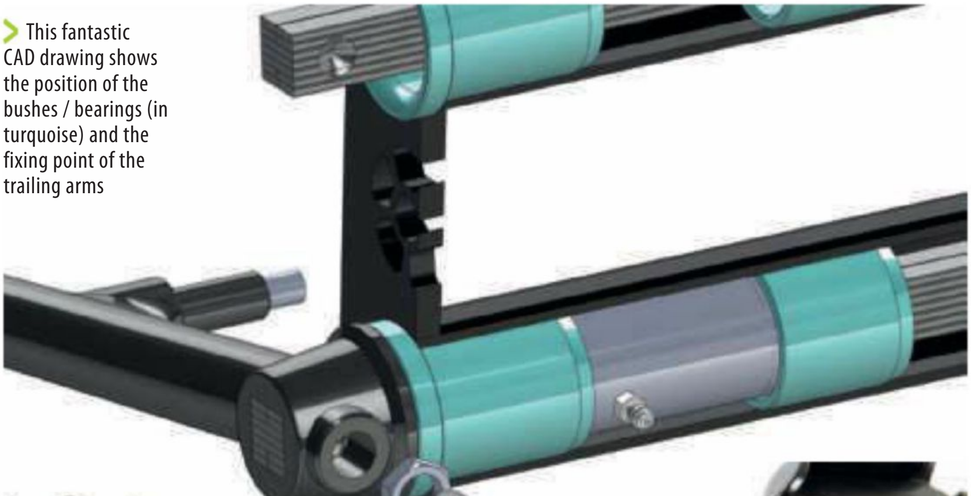
Bump steer is not desirable, and can be overcome in a number of ways. Firstly, by locating the tie rods at a more favourable angle, either by re-positioning the mounting point of the track rod ends on the steering box, using a 'quick steer' kit or flipping the tie rod mounting point on the spindles, so rather than being fitted from the top, they are bolted in from below. This can be done by using either anti-bump steer bushes, which are fitted into the spindle by drilling out the existing taper, or by reversing the taper with the correct angle reamer. Both modifications are best left to a machine shop, or somebody with the correct hand tooling who knows what they're doing, as trying to accurately size an interference fit between two components using a cordless drill is a recipe for disaster.

> "You'll often hear people say their modified VW "drives like stock""

Whilst this article primarily covers the front end, you must also consider the rear and overall chassis set up (I'm hesitant to use the word 'stance' here as I personally dislike it).

## Understanding castor

With a vehicle with a nose-down attitude, or rake (Cal Look) it's a good idea to address the castor angle of the front beam. Castor is the angular displacement from the vertical axis of a line through the kingpin or centre line of the balljoints when looked at from the side of the car. The purpose of castor is to provide a degree of self-centreing for the steering, making the car more stable in a straight



This fantastic CAD drawing shows the position of the bushes / bearings (in turquoise) and the fixing point of the trailing arms

Custom made Sway-A-Way-style adjusters are a vast improvement over the originals as they hold the aluminium adjuster block securely through all of its potential arc, unlike the originals

Delrin engineered plastic bushes are a better option then the more commonly used urethane bushes as they're more robust and require minimal maintenance

## NARROWING TYPE 3s

Type 3s run a splined torsion bar rather than torsion leaf set up in their front beams (much like the rear end of most air-cooled vehicles). As a result, they can be lowered by simply removing the trailing arms and re-fitting them at a different angle. Narrowing them, however, is a massive engineering undertaking. It's been done, but consider the cost of the work prohibitive.

An alternative is to use narrowed trailing arms but these can only be obtained from specialist suppliers and offer only modest results.

More commonly these days, Type 3s are being converted to Type 1 (Beetle) beams. These use Beetle trailing arms, spindles / leaf packs in a beam that has Type 3-specific mounting points. The rest of the information in this article can then be applied.

line and reducing its tendency to wander. Too little castor and the steering will be skittish and require a lot of adjustments when driving, too much and the steering becomes heavy and the car will have a tendency to understeer.

Consider castor with regards to the angle of the floorpan / chassis to the road surface. If the front is nose down, you'll need to increase castor to compensate by fitting castor shims behind the bottom tube of the beam (Beetle / Ghia). Some Bus beams are available with in-built or adjustable castor, so check before you buy. If your car sits level, you do not need castor shims. If your back end sits lower than the front, you need to adjust your suspension because it looks terrible.

Significantly lower your VW and you'll soon be into the realms of chassis modifications. These come in earlier in the lowering process for a Bus (Bay Window owners brace yourselves for some serious work). We're talking chassis notches for tie rods and rear arms and wheels tubs front and rear. Some informed advice should be exercised here, as you can quickly find yourself on the wrong side of the VOSA rule book. Basically speaking, these are not modifications you should be undertaking as your first dive into the world of fabrication!

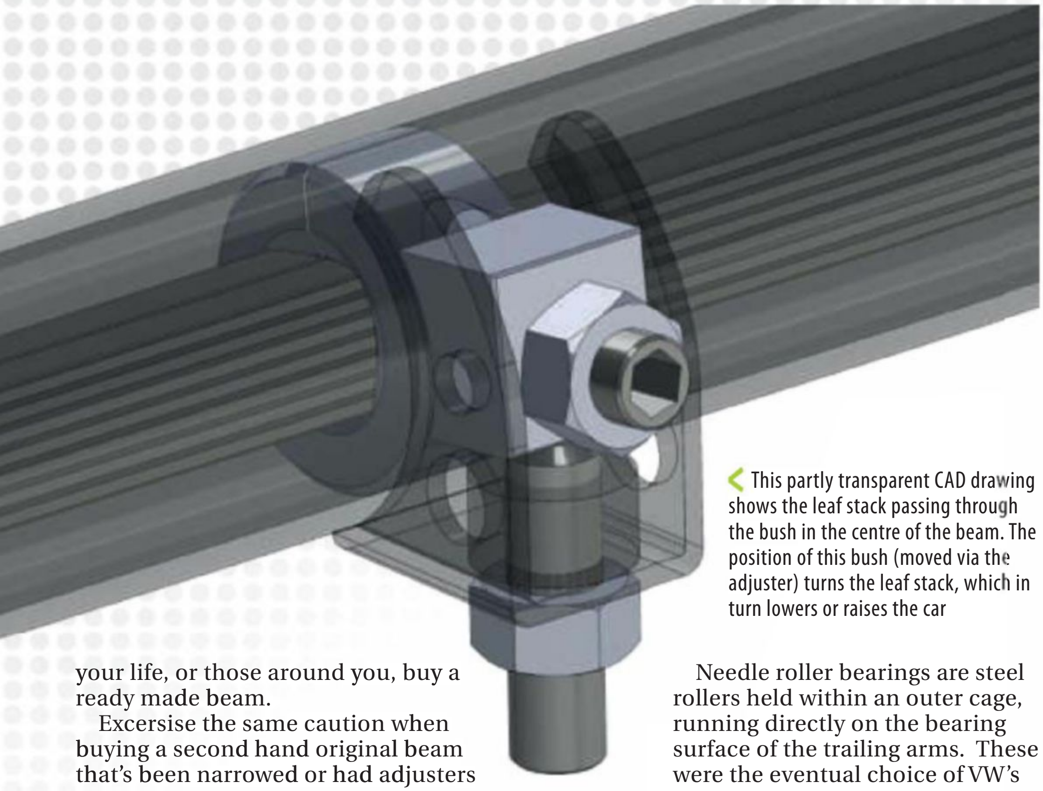
With a Beetle, anything narrower than a 4-inch beam, or 5-inch with custom made shock towers, will require modifications to the inner wings. How much depends on the width of beam fitted, and it's no small task to do this well. Which is why some people choose to run without dampers, or 'shock-less' in common parlance. Without going too far into MoT testing criteria, we will say this is a grey area. Running without shocks is very much frowned upon. Your vehicle left the factory with shocks fitted for a very good reason and it should still have them today. A lack of shocks will affect handling and *should* lead to the refusal of an MoT certificate, or at the very least a vehicle defect notice being issued. Your call.

## Which beam to buy?

These days you can buy a scratch built (brand new) beam from a variety of companies, and there are a bewildering number of options from bearing types to available finishes. You can also buy the bits to make adjustable and / or narrow an original VW beam yourself, and this was the preferred choice for years before companies started investing in making their own due to market demand.

Doing it yourself sounds simple – take a standard beam, cut it in half, move certain bits, weld in adjusters – and there are online guides a plenty. However, this is a critical structural part of your car and it takes a certain amount of skill, fabrication knowledge and welding ability to do this correctly, and safely. Note: fabrication is different to welding, more so when you are talking about a critical suspension / chassis component such as the front beam. Just because your mate Dave welded some patches on the sill of his Nova 15 years ago doesn't make him the man for this job.

If you don't know what you're doing, don't risk



This partly transparent CAD drawing shows the leaf stack passing through the bush in the centre of the beam. The position of this bush (moved via the adjuster) turns the leaf stack, which in turn lowers or raises the car

Looking down the length of the bottom tube – here on a balljoint beam – you can see the centre bush that holds the leaves in place. At 10 o'clock on the bush you can just about make out the point of the grub screw that fixes the leaves to the bush

your life, or those around you, buy a ready made beam.

Excersise the same caution when buying a second hand original beam that's been narrowed or had adjusters added. Just because the welds look good, or have been ground down smooth, does not mean the work is structurally sound. This isn't scaremongering, there are plenty of beams that have been done well, we're just making a point.

## Buying new

A brand new beam has the advantages of new materials, new parts / bearings and the ability to customise it to suit your needs. As with anything, quality and price varies, so ask advice and speak to the people putting them together about your application.

All should be built from cold drawn seamless (CDS) tubing, which has tolerances for internal and external diameters, straightness and material grade. End plates / shock towers should be structural grade steel. Designs, adjusters and bearing types vary, but all should have a high tolerance of fit and finish.

The difference in bearing types is one thing people often ask about. Basically, they fall into three categories: urethane, engineering plastic or needle roller. Urethane bushes are injection moulded to specific sizes to fit both beam and trailing arms. Despite being moulded to a known size, they require reaming / sizing to achieve a proper fit on the trailing arms. They are a little soft and require regular greasing, so have fallen out of favour in recent times due to decreasing quality. The only benefit is they are cheap.

Engineering plastic, of which Delrin is currently the most popular, replaces the stock VW Micarta bearings with a modern material capable of providing very good bearing properties. Again, these are machined to suit both beam and trailing arms. The fit should then be brought into tolerance using a reamer to accurately size the internal running surface. Such materials are robust and low maintenance.

"All should have a high tolerance of fit and finish"

Needle roller bearings are steel rollers held within an outer cage, running directly on the bearing surface of the trailing arms. These were the eventual choice of VW's engineers from around the early '60s, and provide a free running, high load capacity bearing when fitted correctly. However, the bearing surfaces of both beam and trailing arms are required to be within exacting tolerances and condition to get the best out of these. As a result they are a little more expensive, more so if you need replacement / refurbished trailing arms.

Which to choose? For me, it's a toss up between needle roller bearings and Delrin bushes. More critical is the way they fit.

## Fitting a beam

In theory, fitting a narrowed beam is no more difficult than fitting a stock one. Even narrowing the leaf packs is simple enough, but easy to make a hash of if you're not on the ball. With the leaf pack located in the centre boss, equal amounts should be marked off and then cut from each end of the leaves to suit the new beam width. The leaves and trailing arms should then be re-fitted to allow you to mark the new centres of the grub screws. These must be accurately centred or they can cause the trailing arms to bind against the bearings or knock side to side under cornering, side loading the centre boss hardware. The leaf packs should then be drilled off the car using low speed and high pressure with the correct angle to suit the taper on the grub screw. A pillar drill is a huge help.

The only other thing to be aware of is correctly shimming link pins, but there are plenty of good online guides to doing this.

Our aim here is to give you a general overview and enough information to enable you to ask pertinent questions before committing to buy. If you are at all unsure, please don't just hope for the best, there are plenty of people who can help / do it for you. ■

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Rolling dirty on a set of old American Eagle 5-spokes Steve has kicking around. Without an engine at this point so not at driving height

**OWNER INFO**

**NAME:** James Peene

**JOB:** Editor

**CAR:** '60 Beetle

**WORK THIS MONTH:** Finally fit the 4-inch narrowed beam and crack on with the conversion to 12V electrics

# Electric Bug-a-loo

## More ups and downs this month, but a final goodbye to 6V electrics

With the deadline to have my car at The *VolksWorld* Show missed and but a distant memory, work continues on the '60 at a slightly more leisurely pace. As *señor* Gosling put it, what's the point in rushing it and getting your car out there not looking how you want it? A wise man, and good with his spanners, too.

Waiting for parts to arrive has meant a bit of hopping around from one job to another, so the build has been a bit of an organic process. As I reported last month, waiting for bits to arrive for the 12V conversion meant attention could be turned back to the suspension.

The beam I bought from Aire Valley Speed Shop was their ex-display piece. Hence the rather splendid paint job it sports, courtesy of Gavin Jones at Trailer Queen Restos. Suffice to say, everything I've painted myself on my dining room table to be fitted to it looks pony in comparison. But I've decided not to worry too much about that, as I plan to drive the car, so it'll all be grubby soon enough, and I don't imagine I'll ever look at the beam again once the fuel tank has gone back in.

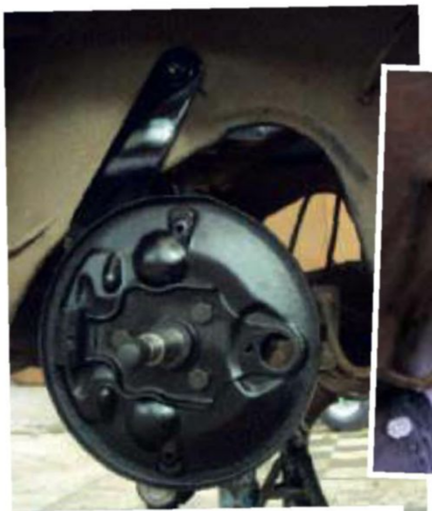
> "The entire build has been a bit of an organic process"

The beam was a tight fit against the inner wings but, other than that, went on a treat, with everything lining up as you'd expect from a quality piece of well thought out kit.

Ian at E's Autos had fitted new king and links in my spindles and everything in the front brakes was replaced with new, just to be on the safe side. The moment of truth came when I finally took the car off the axle stands to check out its new ride height. At this point, I hadn't finished detailing my Flat4 Fuchs (this is the fifth

My splendid Aire Valley beam was painted by Trailer Queen Restos. The steering box wasn't!

A snug fit, prior to cleaning all that muck and filth off the inner wings



Dropped spindles and backing plates fitted, all rattle can blacked by my good self

set I've done now!) so we bolted up some old 5-spokes Steve had sitting in the corner of the garage.

To say it looked the dog's would be a massive understatement. So much so, Steve and I spent the rest of the evening just admiring its new look, him saying I *could* leave it on the gnarly fives. The ride height will change when the engine goes back in but, at the point I took these pictures, I was still waiting for my new regulator to turn up from Germany. When it does, it'll be fitted on the back of the fan shroud to keep things tidy, and to make replacing it a bugger.

## A bleeding chore

Bleeding the brakes turned into a chore. There was no air in the system but the pedal just wouldn't firm up. The diagnosis? It's hard to explain, but under normal operating conditions the piston in the cylinder only extends so far. When bleeding the brakes, the piston extends further than its normal stroke, which pushes the rubber seal beyond its normal operating position and, in my case, into a corroded area, which then ruins the seal and means you can bleed the system of air but it won't seal.

Weirdly, this has now happened on the last three cars Steve and I have done brake work on – my '60, the Penny Pincher and Steve's Early Bay. The remedy? New master cylinders all round. That done, the '60 now has a firm pedal.

While all that was going on, Steve was busy convincing me I should just bite the bullet and buy new 12V semaphores, rather than dick about with voltage droppers and so on. For the sake of ease, but not my wallet, I took his advice and, at the same time, bought some flashing LED bulbs from Classic Dynamo & Regulator Conversions Ltd. (www.dynamoregulatorconversions.com), so they now flash when lit and there's a fighting chance they'll be seen by other road users.

That's all we've room for this month, and there's still loads more to tell… ■

^ Original single circuit master cylinder was thought to be okay, but I'll come back to the problems with that another time

v Stock 6V semaphores have made way for some new 12V versions

^ 12 volt tail lights make a vast difference

> 6V size but 12V starter motor came from an old industrial engine

>> You can't tell in this picture, but my semaphores now flash, too

## VOLKSWORLD PROJECT CARS

Work VWs, play VWs

**Owner:** Steve Gosling
**Cars:** '61 ragtop, '67 Ghia, '70 Bay Window
**This month:** Despite a minor charging mystery (I love 'em) I took the Bay to The *VolksWorld* Show and lined up with Jimbo's (*VWt* mag) 16v Mk1 Goof and photographer, Jon Robinson-Pratt's air ride Bug

Under wraps

**Owner:** Mike Pye
**Cars:** '56 Oval, '23T Volks Rod
**This month:** Not exactly progress but at least a change of scenery. My car has temporarily returned to Steve's garage to be made roadworthy. About time, too

Jumping for joy

**Owner:** Cathal O'Toole
**Cars:** '77 Cal Look Beetle, GT Beetle and '73 Bay
**This month:** As I type this it's just 2 days away from Jumpstart so Graham and myself have been prepping the fleet

Deep clean

**Owner:** Mark Walker
**Car:** '68 Beetle, '67 Beetle
**This month:** I've been working on the interior of an original paint '73 Westy I own with a friend. The original upholstery came up a treat!

Underworld

**Owner:** Steve Parsons
**Car:** '60 Split
**This month:** The only job achieved since the mad rush to get the re-worked Kombi to The *VolksWorld* Show has been to check everything is still tight and lubed up

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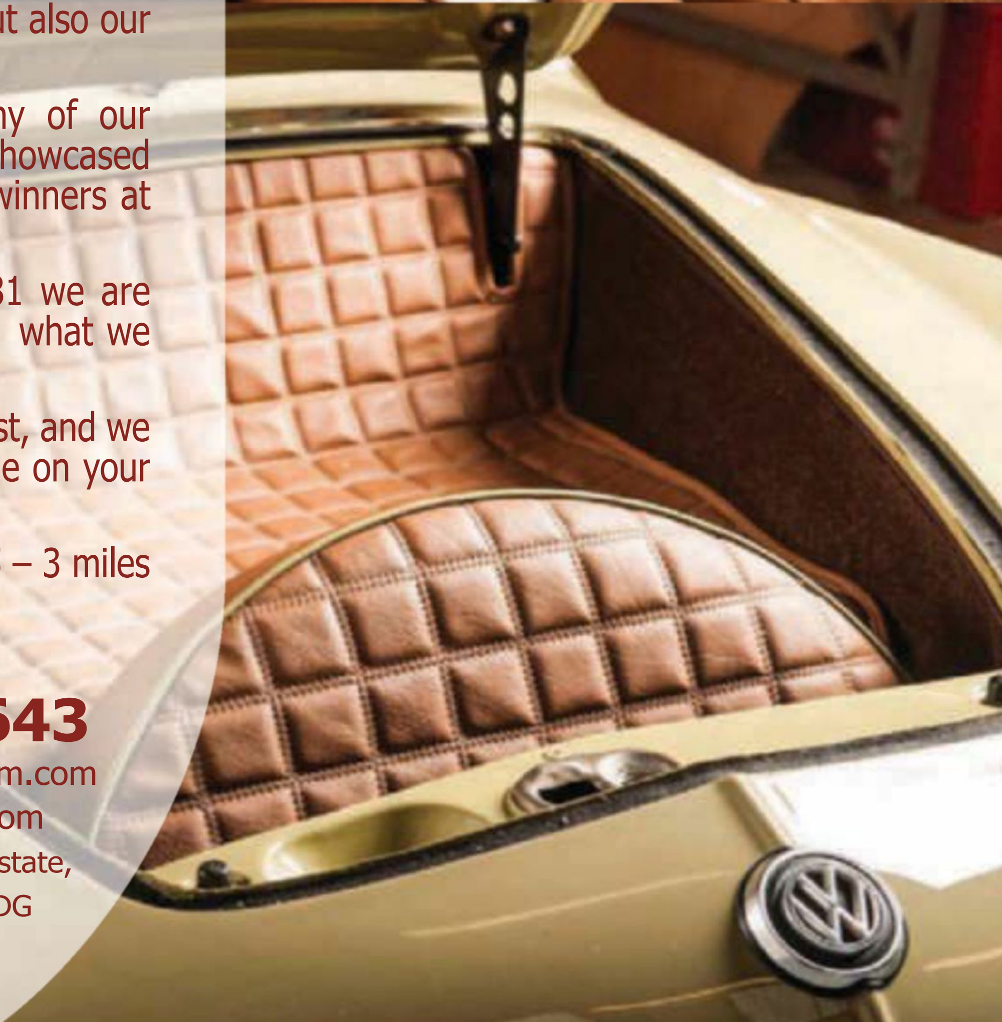

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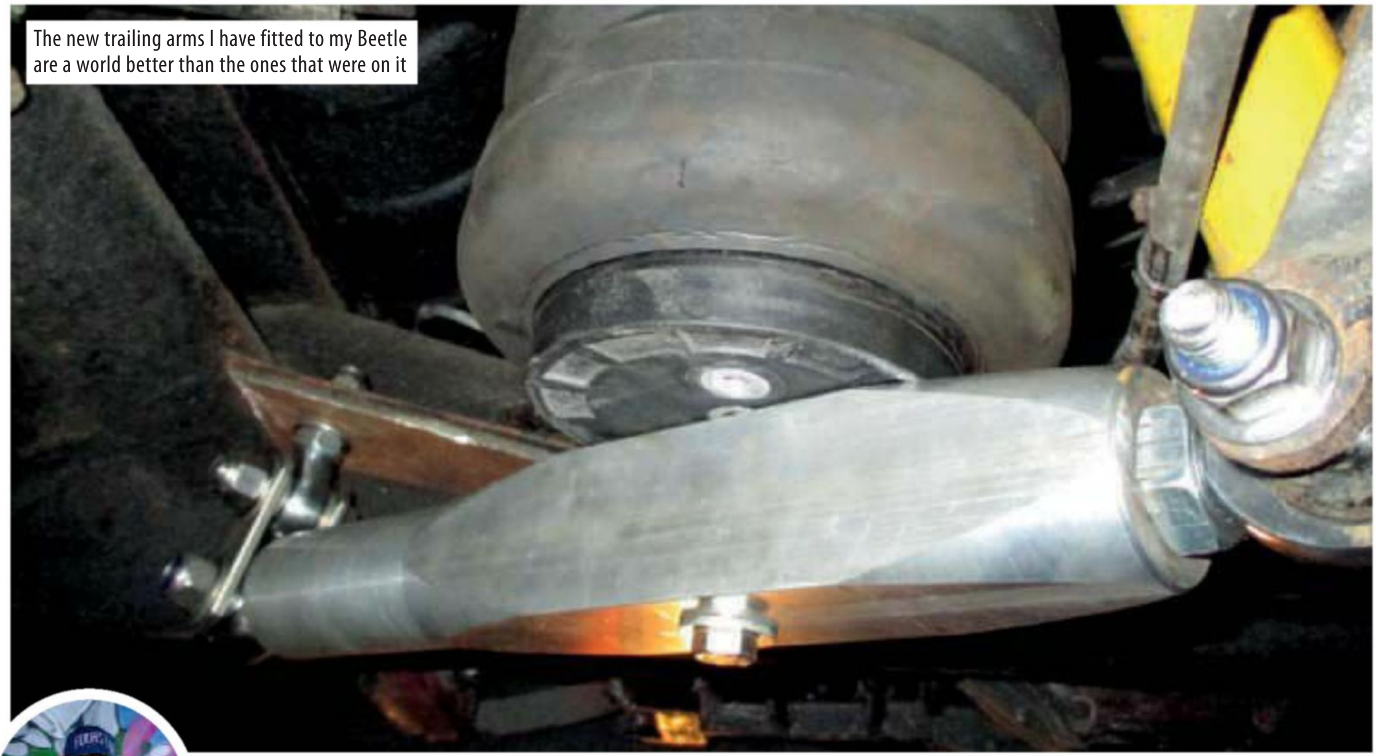


The new trailing arms I have fitted to my Beetle are a world better than the ones that were on it

**OWNER INFO**

**NAME:** Jon Robinson-Pratt

**OCCUPATION:** Photographer

**CAR:** '64 Bug

**WORK THIS MONTH:** New hub seals, re-detail wheels; remove louvred firewall; re-engineer rear air ride set up

# Safety first

## After Jon's near-death experience, it was back to the drawing board…

In my last report, did I say something along the lines of "this whole air ride thing being a lot simpler than I originally thought?" Well, in theory it may be, but I can now categorically say that in practise it most certainly is not! It's safe to say in the process of sorting my car out, I have had my eyes opened somewhat on the topic of safe suspension practise.

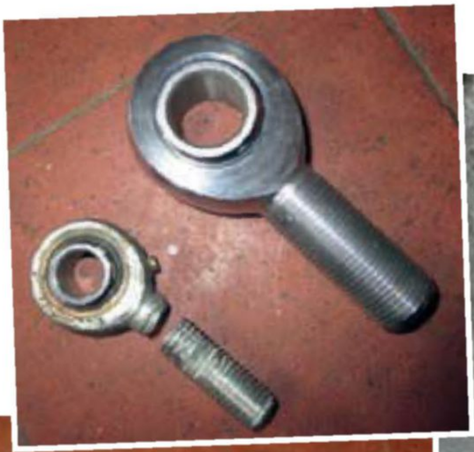
So let's go back a few steps. As with all project reports, I submit a handful of descriptive photos to go with the text. Mere minutes after submitting the shots for the last report I received a 'phone call from a concerned Mr. Steve Gosling. He had spotted that the trailing arms that carry the rear air bags were bolted to the chassis through the 3mm steel plate between the frame horns and the torsion housing. As Steve pointed out, this is not a structural part of the chassis, only present to protect the brake pipe from damage. So concerned was he in fact, he stated *VolksWorld* wouldn't be prepared to publish the pictures. Though I hadn't realised it at the time, he had a point. Safety first, and all that. We had a lovely chat for an hour or so, during which my welded 'dog leg' spring plates also came under scrutiny. In fairness, I knew they are a big no no, so had already bought a pair of adjustable spring plates to fit in their place.

But back to the reason all this had come to light in the first place. The snapped rose joint that had derailed my car when I was out driving. Clearly, the M12 thread joint was not man enough to carry the weight of

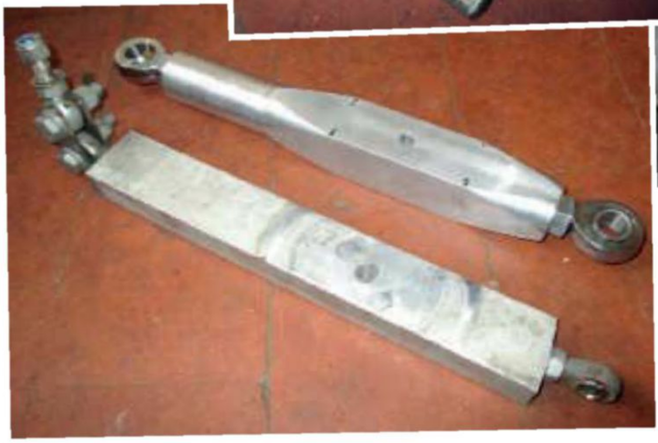
^ New hub seals cured an annoying, and potentially MoT failing, leak

< At last, the B289-style louvred firewall has gone. That's factory paint back there

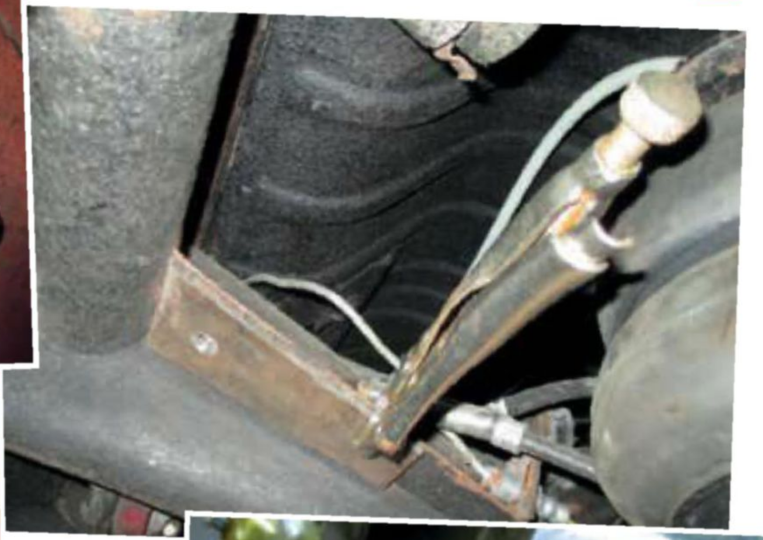
> Masking up the wheels was a ballache. It's not a job I ever want to do again!



On the left is the 12mm rod end that sheared, on the right the ¾in replacement



At the bottom are the original trailing arms, at the top the new ones. A bit nicer, huh?



Here are the new 6mm plates I've added to the framehorn gussets.

Yep, it helps if your dad has a lathe, but I'd never used it before so was quite pleased with my first efforts. Next month I'll try making my own wheels…

the car so, after much research (read: penny pinching, I had no idea how horrendously expensive – these things can be) I found some good quality, yet affordable ¾in replacements. In comparison to the old joints, these things are massive. This led to the next problem… The threaded part is almost as thick as the old trailing arms, so there isn't enough material to tap them into. A quick search on t'interweb and two pieces of 40mm square aluminium bar were on their way, together with the apporopriate size lathe drill bit and tap to do the job.

Bigger joints mean bigger trailing arms, which mean bigger bolts, bigger brackets and so on. This was getting expensive. But you can't put a price on safety, so I just had to sit back and wait for the parts to arrive. In the meantime, I set about sorting a few other jobs that needed doing.

> “ *VolksWorld* wouldn't be prepared to publish the pictures ”

## Jobs for the boy

In no particular order, I replaced the leaky hub seals (quite a simple job, and luckily the oil that had escaped hadn't fouled the brake shoes so that was done in a couple of hours); re-cut the ends of all the air lines at the rear due to having a small leak somewhere, and removed that damn louvred firewall (I had to fold it to get it out and took great pleasure in doing so!). Sadly, where somebody has painted it matt black, the lovely Anthracite bulkhead underneath has been peppered with matt black stripes where the over spray had passed through the louvres. Still, half a day of T-Cutting and it came up a treat.

Inspired by that, I spent the rest of the day tidying the engine bay wiring and now it all looks pukka. I then set to with the fine line tape, masking up the wheels for a fresh coat of gloss black to make them a bit more presentable at The *VolksWorld* Show. Editor Peene says he finds this a therapeutic task. Screw that! I did all four wheels and never want to do it again, but they do look a whole lot better.

Finally, I fitted the aforementioned adjustable spring plates. This was another job I thought would be easy, but proved to be anything but. I finally got them on the car, only to find they don't work! There's nothing wrong with the plates, but they are straight, not dog legged, so even on maximum drop they hit the chassis stops and I lose about two inches of 'stance', so I have temporarily put the old plates back on, but only until I can afford something more suitable.

By the time I'd achieved all that, the new parts I'd ordered had arrived, so I immediately cut the aluminium billets to length and sent them off to an engineer to be drilled and tapped to accept the new rose joints. Whilst that was being done, I cut some 6mm steel plates to beef up the gussets on the chassis where the front of the trailing arms mount. In an ideal world, I would have cut out the old plate and replaced it with the thicker one, but as that is a body-off job to do properly, I opted to weld the 6mm plates underneath the existing 3mm gussets, ensuring maximum weld penetration into the frame horns and torsion bar housings for strength. With that done, the new trailing arms were trial fitted. The bigger rose joints needed some sleeves to keep the bolts nice and tight, so I knocked some up on dad's lathe. I'd never used a lathe before, but I can now. Then, when I wasn't looking, dad re-shaped my basic square trailing arms into what I can only describe as works of art. Such a shame they're under the car.

So, with the '64 back on its wheels, I set off on the 200-mile trip to Sandown Park. Talk about trial by fire… ■

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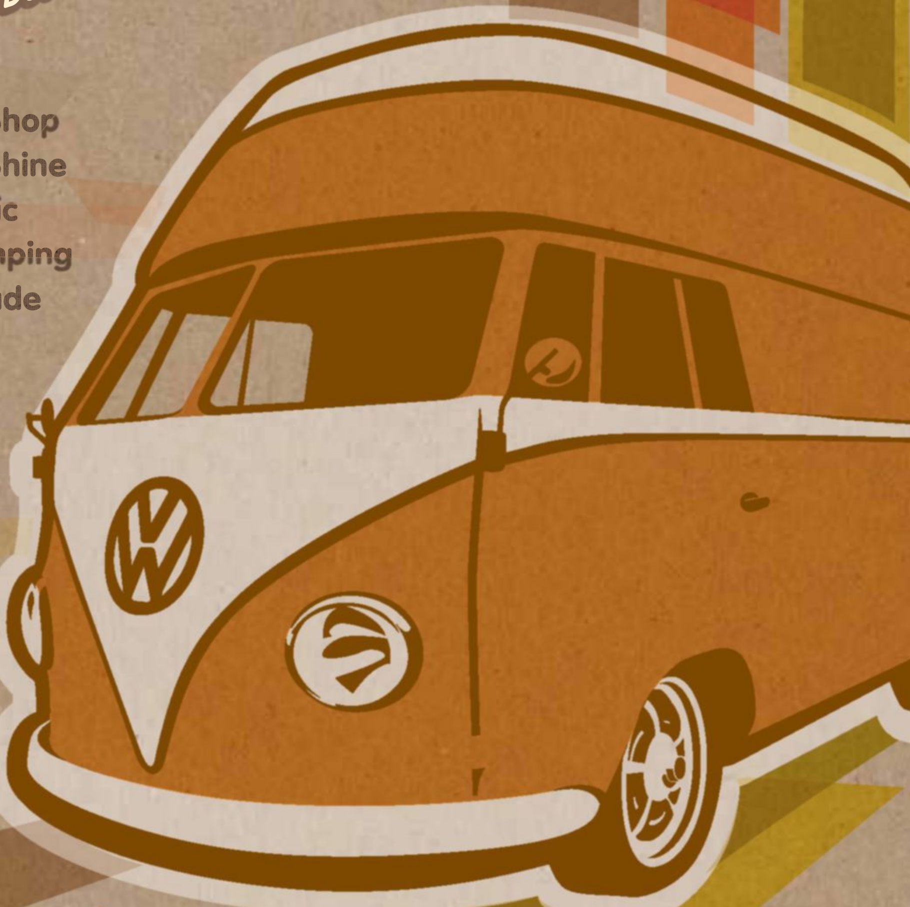

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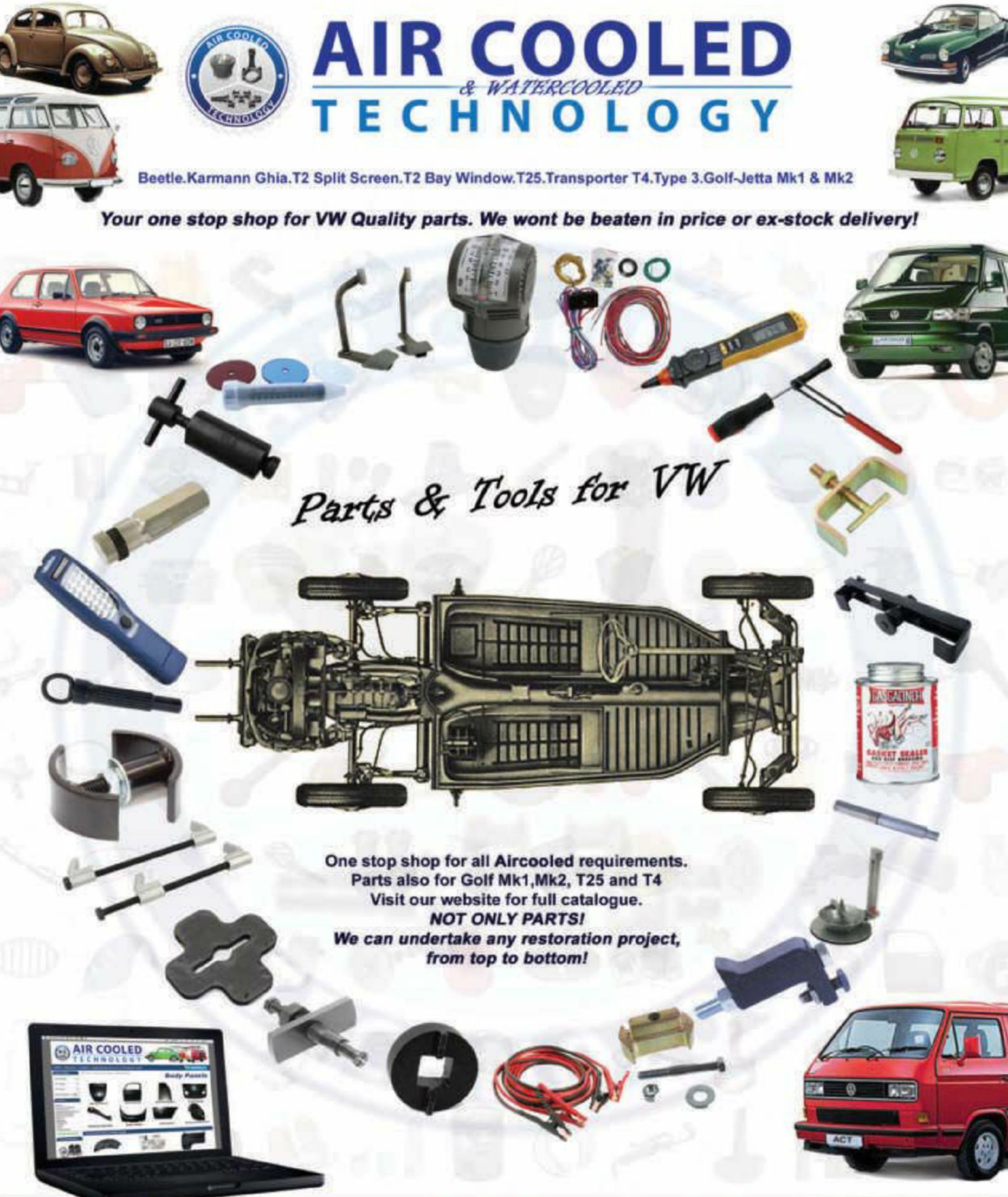

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# Six into 12

## If you drive your VW every day, having a full complement of 12 volts will be a joy

**Words and photos** Mark Walker

Last month, we showed you how to replace the dynamo on your Beetle. For us, that was a precursor to a full six to 12V conversion on our Swedish import '67.

There are multiple benefits to running 12V electrics, not least better lighting and starting. There is also the better availability of replacement components. In short, unless you are a diehard for originality, there really is no logical reason not to do it.

Please note though, there are numerous small detail changes for every year of Beetle production, so treat this how to as a general guide to the process.

If in doubt when doing this job on your car, consult a good VW service manual, or do as we did and print off a colour wiring diagram specific to your model from www.thesamba.com. Even if you struggle to get your head around wiring, with the aforementioned diagram, and a bit of patience, you should be able to find your way. ■

### JOB INFO

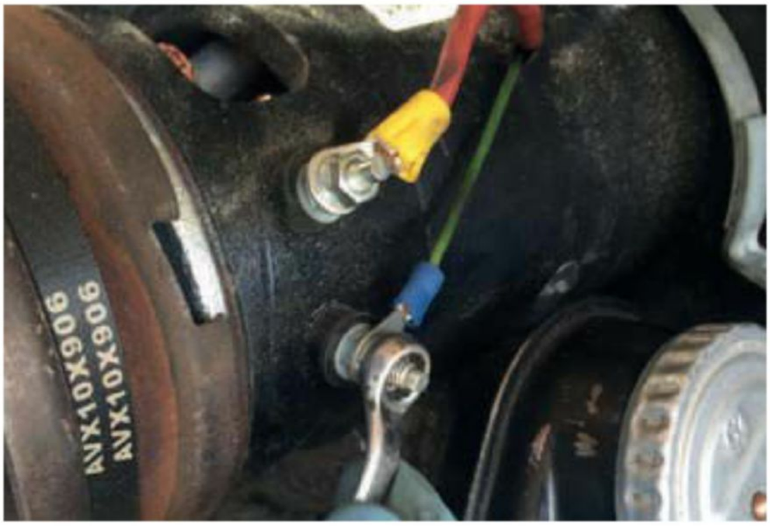
**TOOLS NEEDED:** Wire strippers / crimpers
Screwdrivers, flat and cross head
8, 13mm spanners

**MATERIALS NEEDED:** Selection of electrical terminals, 12V bulbs, cable ties

**TIME TAKEN:** 5-7 hours

**COST DIY:** £100-£150

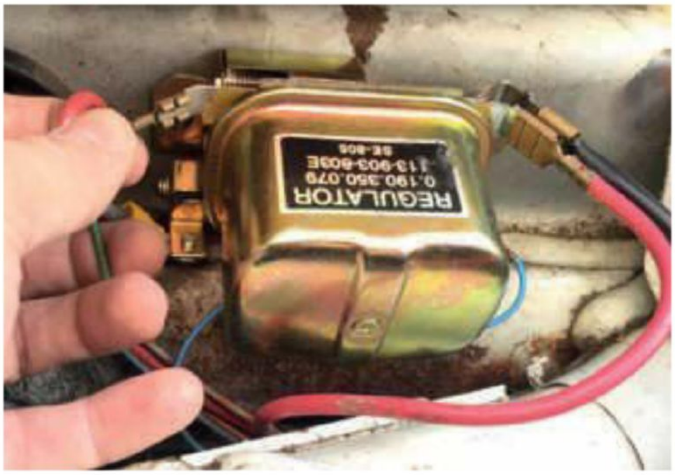
**PRO:** approx. £250-£350 parts and labour



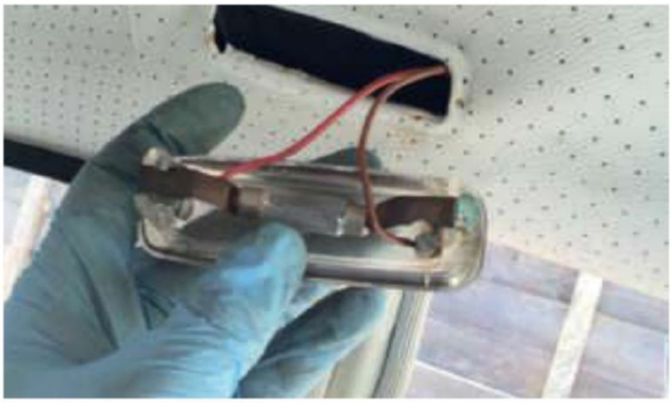
**01** If you are starting from scratch, you'll need to go back and pick up a copy of last month's magazine, where you will find all the information relating to the dynamo swap. With this done, you will need to source some parts before you dive in to prevent interruptions to the job. The basic list is as follows: 12V regulator, choke and idle cut-off valve; 12V headlamp and indicator relays; 'voltage dropper' (resistor) for the wiper motor (or, better still, a 12V armature); 12V bulbs (not forgetting the interior light and dash / speedometer bulbs); 12V horn. Many people also replace the starter motor (and flywheel) with a 12V version but, having run 12V-converted cars for years with the original 6V starter incurring no problems, we chose to save a little money and leave the original part in place

**02** Before you start to do anything on the electrical system, remove the battery earth strap. This is done by lifting the rear seat, undoing the earth terminal with a 13mm spanner, then pulling it off the battery terminal and securing out of the way.

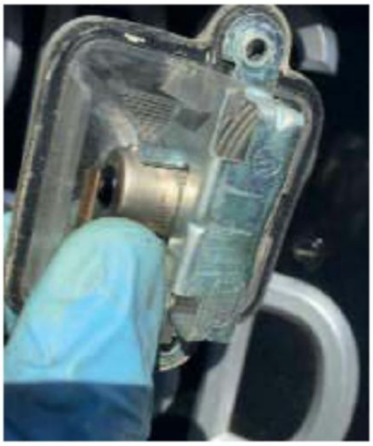
You can now remove the positive connection, then the battery and put the new 12V battery in its place – making sure it is fully charged of course. It needs to be fixed in position with the battery strap, but not connected yet



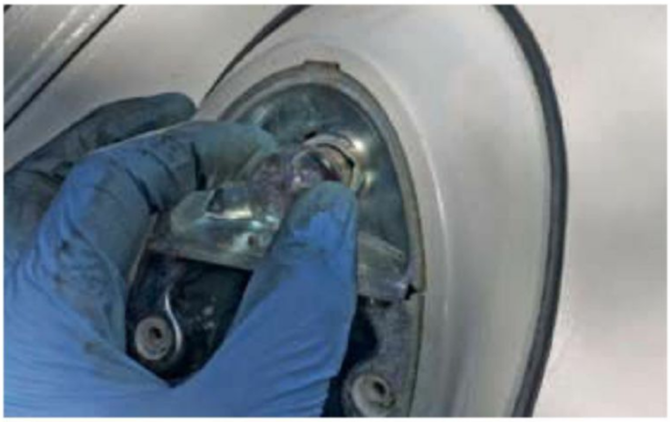
**03** On our car, the regulator was sited under the rear seat, but on earlier cars it can usually be found on top of the dynamo in the engine compartment. For us, it was a simple case of unscrewing the 6V one from the body, changing over the terminals like for like and screwing the 12V one in its place. We did have one terminal connection that needed changing, but it was easy to do in situ. Double check all connections against an appropriate (colour) wiring diagram



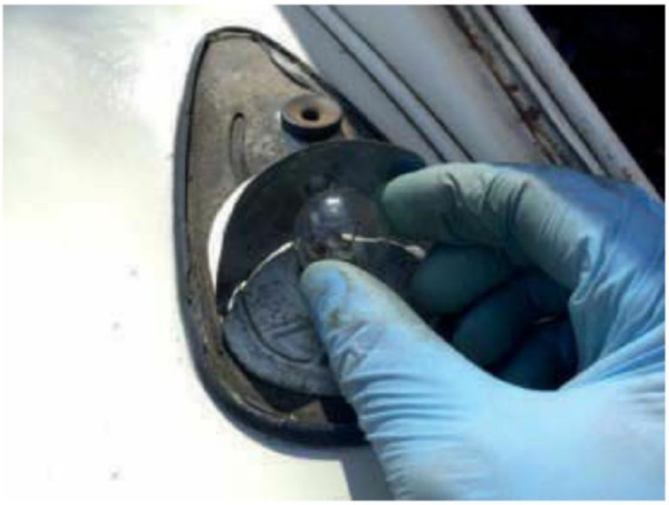
**04** One of the things people often overlook when doing this conversion is the interior light bulb. A 6V one will shine really brightly for a short time, then blow. To change the bulb, take a small screwdriver and very carefully slide it between the plastic lens and the headliner, from the front of the car. There is a detent spring, which holds it in position. You need to push the screwdriver against this and carefully pry the lens down until the unit comes free. Changing the bulb is a simple clip out and in, although the festoon bulbs come in different lengths, so make sure you have the correct one



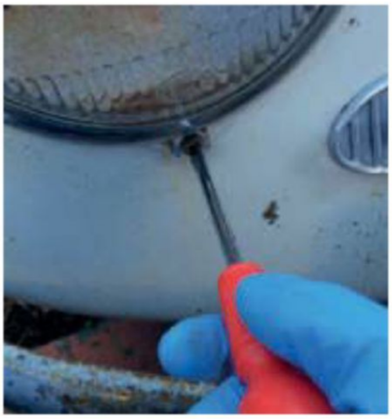
**05** The number plate lamp takes a small cap bulb, as there is not enough space for a standard bulb. To change this, undo the two cross-head screws so you can withdraw the lens from the body. Be careful with the dust / moisture cover around the wire terminal. Swap the bulb over (it is a little fiddly) and re-fit the unit, making sure the moisture cover is back in its correct position



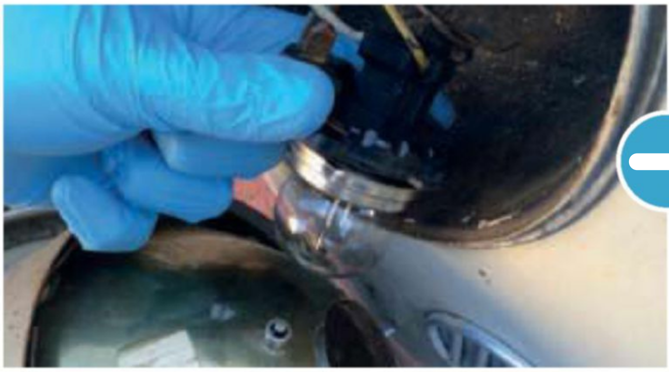
**06** To change the rear light bulbs, use a cross-head screwdriver to remove the two screws holding the lens to the base unit. Quite often, the seal will have become a little stuck, so you may need to give the lens a slight tap with the heel of your hand to free it. Remove the bayonet bulbs and replace with the 12V ones. Be careful when replacing the stop / tail bulb that the offset pins line up correctly, otherwise the bulb won't function properly. When you are happy, re-fit the lens, being careful not to overtighten it



**07** Moving to the front of the car, take a cross-head screwdriver and remove the screw holding the chrome cover onto the wing top indicator. With the screw removed, you can carefully remove this and the lens and set aside. Again, the lens may be stuck to the seal, so may take a bit of wiggling, or some gentle persuasion to come free. You can now replace the bayonet bulb with a 12V one. With this done, carefully line up the cover and lens and re-insert the screw. Again, just pinch it up, don't do it up too tight ask you risk cracking the lens. Repeat on the other side of the car



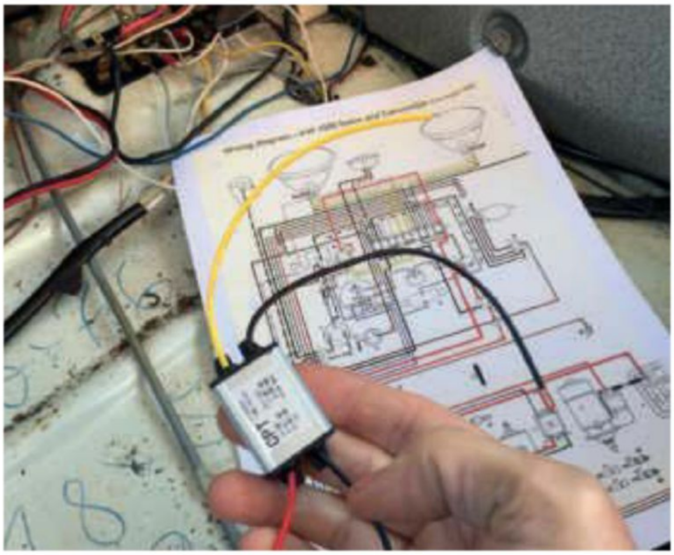
**08** Now we can move to the headlamps. Take the appropriate screwdriver, depending on which type of screw your car is equipped with. Remove the screw and wiggle the headlamp free. If it won't budge, try gently prying under the mounting tab with a plastic scraper that won't harm the paintwork. Be ready to catch the headlamp though



**09** On the rear of the lamp unit is a bulb holder that twists into place, with two prongs contacting the sidelight bulb. This needs to be twisted anti-clockwise to disengage it from the lugs. In order to do this, push against the spring tension and twist. With this done, you can withdraw the bulb and holder from the headlamp. To change the bulb, simply pull it straight out of the holder, being careful not to dislodge any of the three terminals as you do so. Check all connections for integrity and fit your new 12V bulb

**10** Before you can twist the bulb holder back into place, pull the old sidelight bulb out and pop the new one in, making sure the pins are correctly located. Then, locate the moulding on the rim of the headlamp bulb into the notch in the reflector, before pushing and twisting the bulb holder into position. Re-fit headlamp by hooking the rim over the lug at the upper edge and replacing the screw. As ever, don't overtighten

**11** It's easy to forget certain components, so it's worth making a list before you start and checking them off as you go. As it is nestled out of sight under the front wing, I nearly forgot the horn. To change, remove the two wires that connect to the horn, then take a 13mm spanner and undo the bolt that secures the horn to the bracket. Replacement is the reverse of removal, as they say



**12** Some people choose to ignore the wipers altogether, perhaps figuring that early Beetle wipers are pretty ineffectual anyway, so having them run at twice the speed can only help. In our experience, that can actually make them pretty much miss the 'screen entirely, so we chose to purchase the voltage dropper shown through eBay, after a recommendation from Steve at the magazine. This connects in line between the power feed from the fuse box and the wiper switch, with two wires going to earth. It's not an upgrade, it just brings the wipers back to normal speed. Alternatively, you can use a 12V armature from Wolfsburg West (available in the UK through VW Heritage) in your original wiper motor housing, but only on certain types of wiper motor. Check what you have first before you buy

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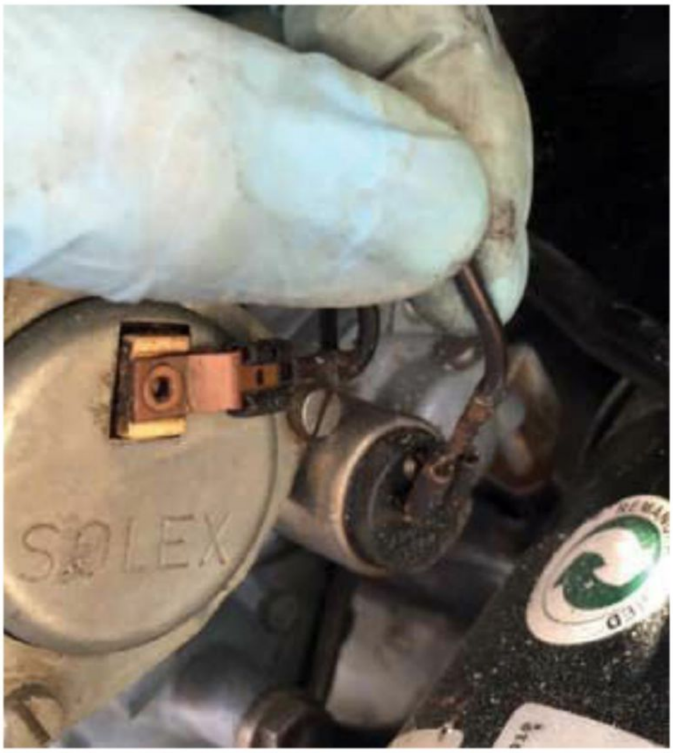
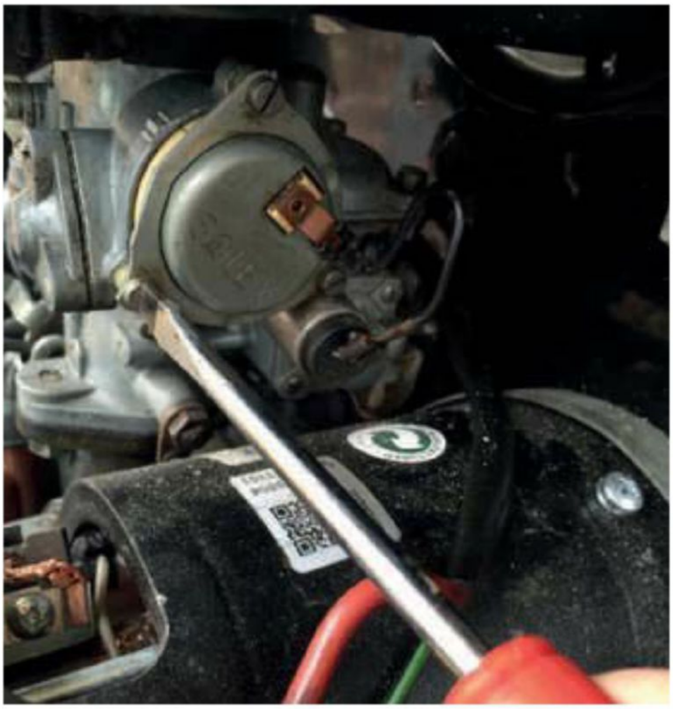
6 VOLT

**13** Now you are working in the under-bonnet area, you can swap over the headlamp and indicator relays for 12V items. They are generally a straight swap and, as long as you keep an eye on your wiring diagram to double check things, you can't go very far wrong. As the original VW relays are located onto their respective brackets with a small metal lug and not all modern versions have these, you may need to secure the replacements with cable ties

**14** Another thing that is very easy to overlook is the instrument bulbs in the speedometer. Each bulb holder can be removed by twisting a quarter turn and withdrawing. The bulbs are a push fit, so are easy to replace. If you are thinking of saving money and time by ignoring this step, be aware that the original bulbs will soon fail with 12V running through them and you could end up not knowing about a major problem, such as a broken fan belt or lack of oil pressure



**15** Moving into the engine bay now, you need to change the idle cut-off valve and choke on the carburettor (again, depending on year and model of car). To replace the idle cut-off (the round, silver item in the middle of the pic above) remove the attached wire then undo the old one with an 8mm spanner and replace, being careful not to over tighten



**16** The choke is replaced by undoing the three screws that hold it into the carburettor body. Be very careful when removing these as the choke is held in place by a ring, which is spaced out from the carb body with three tiny nylon spacers that are very easy to lose. When fitting the new choke, be sure to line up the mark on the choke with the one on the spacer then, when the engine is running again, test that it is functioning correctly

**17** You are now ready to connect the battery and test everything. Assuming no mistakes, you can now enjoy easier starting, brighter lights and can easily fit additional modern accessories, such as a stereo and charging socket for your 'phone / sat nav

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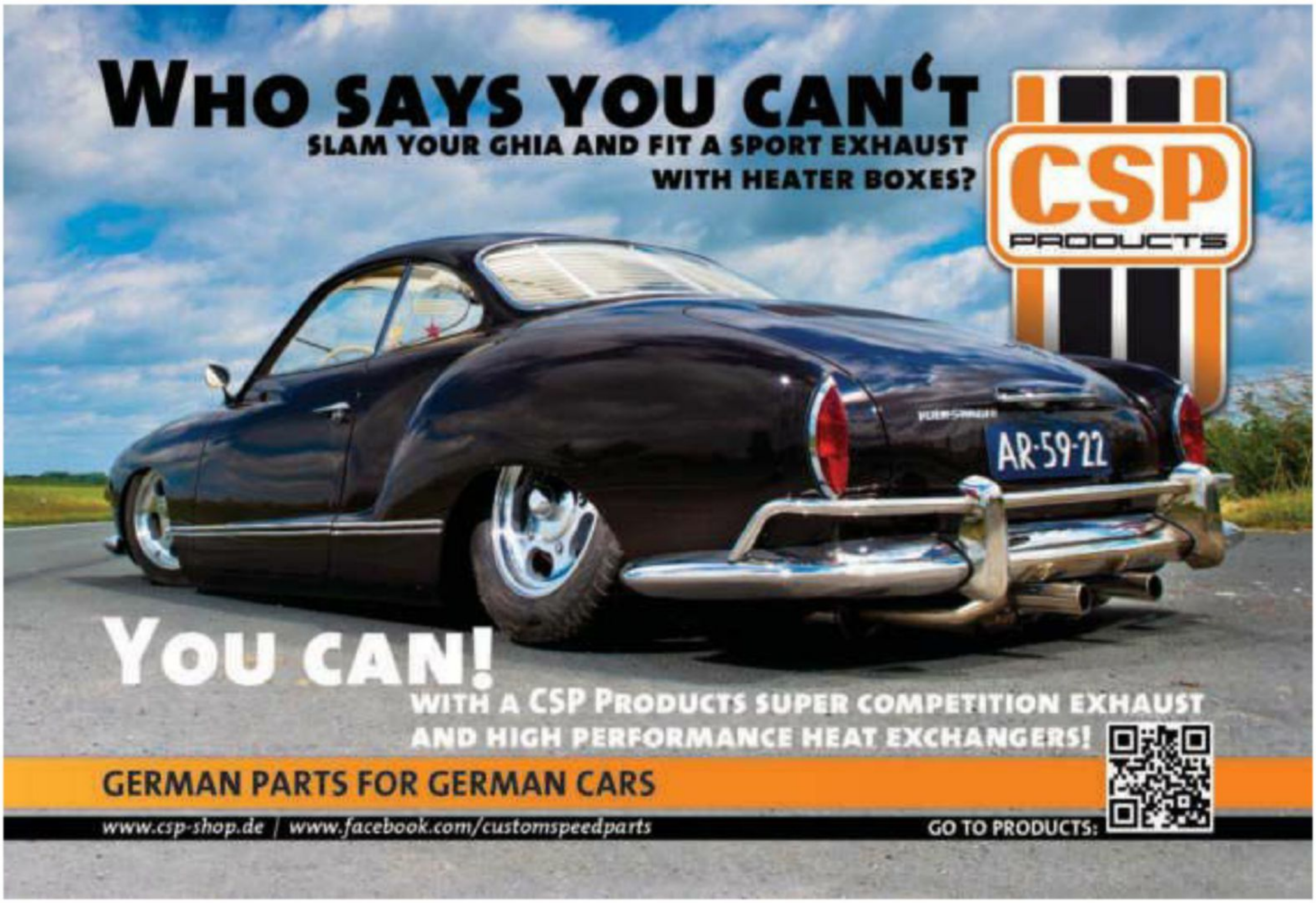

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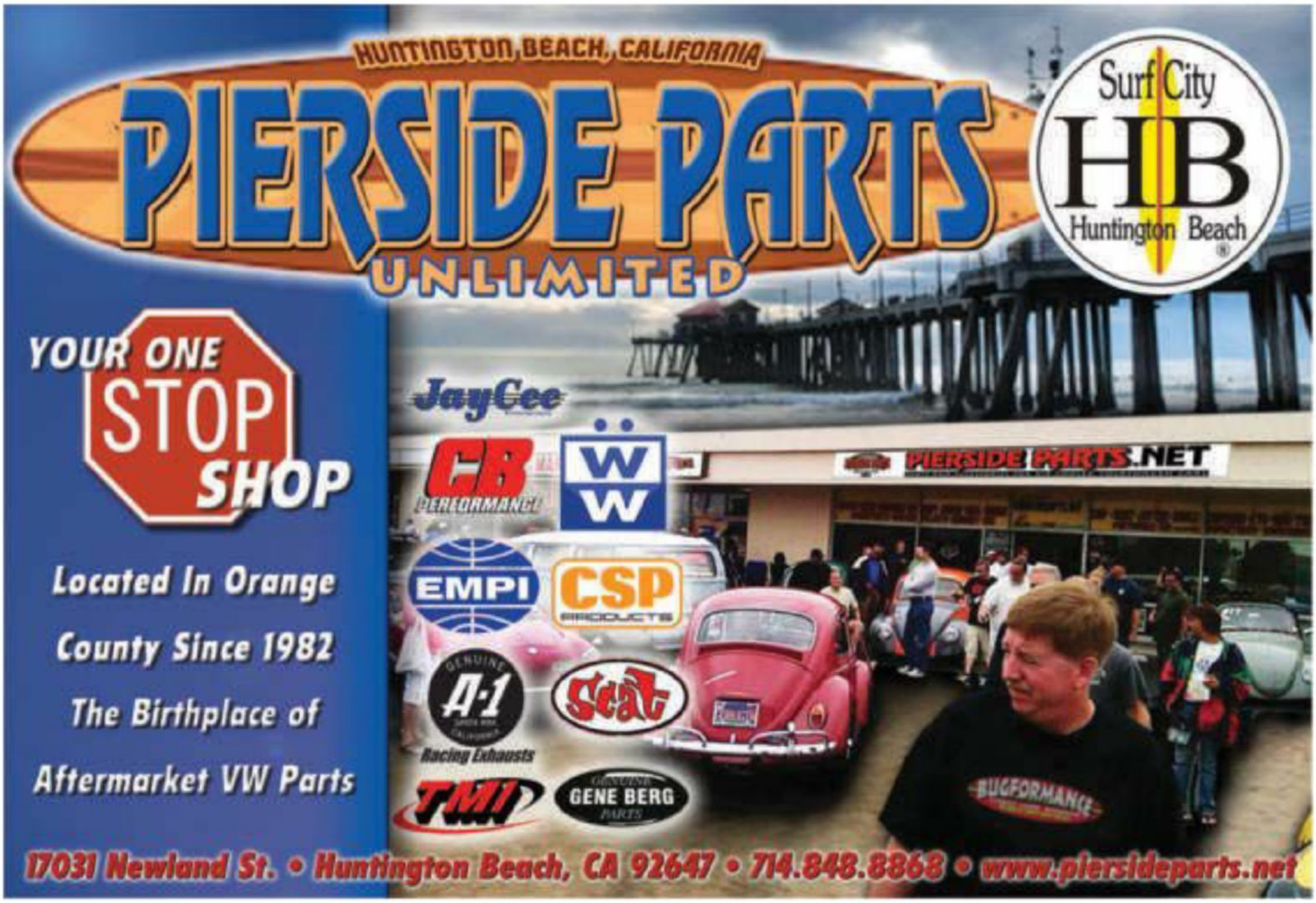

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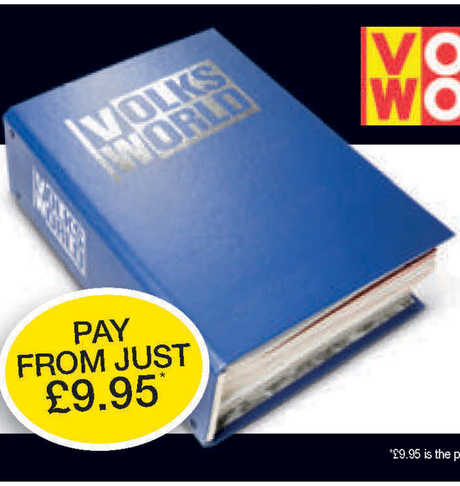

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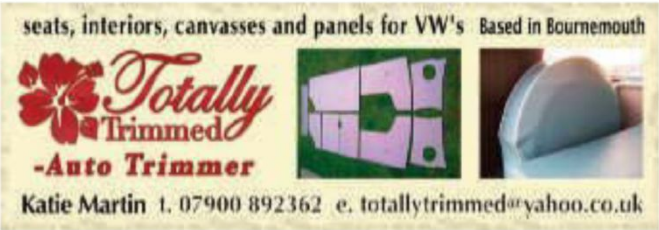
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## BEETLES FOR SALE

### 1500 BEETLE

**1969, 92,000 miles, £6,100.** With front disc brakes, in diamond blue, rebuilt 10 years ago, still in great condition. lots of original features. West Sussex. 01243 784532 (HR)

### 67

**£4,750.** In great condition. Reconditioned engine, mechanically 100%. Starts 1st time. Just had 4 new steel wings. Bodywork fine, Underside solid, Older body off resto. Full MoT. Tax free. Huddersfield. 07887 416087 (HR)

### BEETLE

**1969, £3,000.** Good condition, has been restored and resprayed, differant seats, roll bars fitted, recardo four point seat belts. Great fun to drive. Wilts. 07921 120925 (HR)

### BEETLE

**21,000 miles, £6,500.** This car is a great way to have classic motoring without the breakdowns. The MoT is valid until September. It is a classic 1600i imported from Mexico. The interior has been custom made and colour co-ordinated. All chrome has been replaced with high quality products. The car had a full respray approx 2 years ago and is rust & rot free. Essex. 07983 448254 (HR)

### BEETLE

**60,000 miles, £4,500.** Import. Good Condition. Rebuilt 2003. Tax Exempt. MOT to July 2016. Regularly driven. Well maintained and recently serviced. Cream leather interior, rear disc brakes and air conditioning. Dorset. 07990 758447 (HR)

### MR

**1971, 160,000 miles, £5,500.** 100% fibreglass body. Lovely condition and pulls the crowd where ever I go. Has 1.2 engine and has never let me down. Owned for 16yrs and always garages. Will come with new MoT. Stunning car. East Sussex. 07956 355921 (HR)

### T1 BEETLE

**1972, 87,000 miles, £1,500.** Had a complete rewire and thousands spent on bodywork. 1200cc engine sorn off the road at the moment. Extra parts to still be fitted, to come with the car. Selling due to ill health and no longer have the time to finish her. Stoke On Trent. 07413 170619 or 01782 768832 (HR)

## CAMPER VANS FOR SALE

### 74 BAY

**th rock & roll bed.** 2 bunks in pop-up roof. Perfect upholstery, curtains all round. Roof rack. Perfect runner. Minor rust on body. Growing family forces sale.Mileage: 91,228 miles, £13,000. Full width rock & roll bed. 2 bunks in pop-up roof. Perfect upholstery, curtains all round. Roof rack. Perfect runner. Minor rust on body. Growing family forces sale. West Cambridgeshire. 07547 861398

### CAMPER

**1972, 72,320 miles, £12,995.** MoT until end April 2017. Owned for 15 years and regularly serviced and maintained Kept garaged. New reconditioned engine 2008. Documentation for all the work carried out since ownership. Pop up roof. Rock and Roll bed. Cooker. Drive away awning. Bristol. 0117 956 2099 (HR)

### BAY WINDOW L REG

**1973, 21,961 miles, £19,000.** Superb condition inside/out, excellent runner, solid underneath, regularly maintained/ serviced, seven years service history, regular show vehicle, MOT Aug 2016 no advisories, full width R&R bed, EMPI5s, loads extras incl awning. Regular family camper. Ready to go for spring/summer. Lancashire. 07811 802996 (HR)

### CAMPER

**miles, £37,500 ono.** Beautiful rust free Kenyan import, professionally restored in 2008. 1600 twin carbs. Just had gearbox rebuild and full service, running really nicely. Firetec installed. Custom interior w/sink, hob/grill, 3/4 bed. Devon. 07510 407555 (HR)

### CAMPER

**1970, 1,500 miles, £22,000.** Original UK RHD. New VW heritage recon 1600 engine and exhaust. Overhauled brakes and suspension. Solid as a rock all round and underneath. Almost original interior. Multimedia system. Hob and sink. 240v hook-up. New leisure battery, retro awning, cover. Too much to list. Professionally tuned - runs perfectly. Must see. Ayrshire. 07860 356517 (HR)

### DANBURY TYPE 2

**35,000 miles, £21,000 ONO.** Air-cooled engine. 5 travelling seats and sleeps 4, pop-up roof and rock and roll bed. New upholstery in summer 2016. Fitted 2-ring gas hob and grill, fridge and sink/running water. Alarm, heater, electric hook-up and leisure battery. Bike rack and drive away awning included. 5 months tax and MoT expires March 2017. Glasgow. 07825 847561 (HR)

### DEVON CAMPER VAN

**70,000 miles, £20,000.** Opportunity to own a Near original classic very few examples left,RHD,Honest excellent all round condition,seeing is believing this is not a time waster, a one off must be seen up close to appreciate. 01460 66681 (HR)

### EARLY BAY DORMOBILE

**1969, 52,000 miles, £23,400.** Fantastic opportunity to become Abigail's new owners. Garaged when not in use. Masses of original features (in and out). Plus additions: Fireboy system; Litesteer power steering; brand new VW Heritage engine and exhaust; Retro Sounds radio and clock. Reluctant decision so will only sell to genuine new home. Dorset. 07969 115755 (HR)

### J P WHITE

**1967, £25,500.** 1500cc registered 2.02 full service history, most MOT's, original handbooks, logbook and purchase invoice. Worcestershire. 07803 044992 / 07812 683305 (HR)

### JURGENS AUTOVILLA

**1975, 160,000 miles, £13,500.** 1.8 litre watercooled. Recent import from South Africa, Solid throughout and with 12 months MOT and fully UK registered. Comes complete with Awning rails but no fabric. Jurgens crockery but alas not a full set. A must view. Herts. 07989 134472 (HR)

### T25/T3

**1987, 93,000 miles, £15,995.** Devon Moonraker, power steering, fantastic condition in and out. 01454 310000 (HR)

### T2 BAY

**2005, 17,900 miles, £27,995.** 1.6 fuel injected air-cooled engine, Danbury conversion, four berth, five seats, lots of extras. 01454 310000

### LOW LIGHT CAMPER

**1969, 140,000 miles, £10,995.** Good looking and great runner camper new clutch new arches and roof gutters great family van with awning and 2 sets of wheels 1 with tyres new recon wenge engine 6000 miles ago aprox all receipts for all parts and pictures of all work carried out available. Macclesfield. 07738 270361 (HR)

### PANEL VAN

**1965, £16,000.** Imported & registered in UK 2001. LHD. 1500cc singleport. MoT November 2016Tax November 2016. Solid van ready for next stages of paint job and interiors. Banbury. 07778 867729

### SHOW WINNING CAMPER

**64,565 miles, £35,000 ono.** Show winning bay, bare metal, no expense restoration, johnson auto works, australia bus, magazine centre page, 1776cc, full leather interior,Porsche wheels, seats, 500 miles since new engine, dry stored, certificate by guaranteed 30000 all paper work. Leicestershire. 07774 857903 (HR)

### T2 BAY

**2014, 3,810 miles, £49,995.** 1.4 fuel injected water-cooled engine, Danbury conversion, four seats, four berth, air con, power steering, huge specification. 01454 310000 (HR)

### T2 2.5L

**1978, 51,824 miles, £9,895.** South African import so dry storage. Full MoT until 05.10.2016, full UK registration, rust free! 2.5L VW engine, drives like a dream, no mechanical issues. Original front leather seats, blank canvas inside. She is a beauty. 07989 589717 (HR)

### T2 BAY

**1968, 14,700 miles, £35,995.** On original 1.5 air-cooled engine, untouched Devon conversion, just one owner from new, fully restored bodywork, very rare find. 01454 310000 (HR)

### T2 BAY

**1972, 101,000 miles, £29,995.** 1.7 litre Type 4 air-cooled engine, Westfalia conversion, original right hand drive model, very sought after. 01454 310000 (HR)

### T2 BAY

**2013, 30,000 miles, £33,995.** 4 fuel injected water-cooled engine, brand new Danbury conversion, up to four berth, five seats, very nice specification. 01454 310000

### T2 BAY

**81,000 miles, £24,995.** 1.6 fuel injected air-cooled engine, Danbury conversion, four seats, two berth, add a roof bed to make four berth for £599. 01454 310000 (HR)

### T2 BAY

**2009, 38,000 miles, £25,995.** 1.4 fuel injected water-cooled engine, four seats, two berth, custom conversion, fixed roof - add a raising roof and roof bed to make four berth for £3,598. 01454 310000 (HR)

### T2 CAMPER

**858,009 miles, £10,000.** Good condition and ready for the summer. Will be sold with an MoT. Selby. 07961 447809 (HR)

### T2 CAMPER VAN

**1971, 58,000 miles, £5,700.** Bay Window Camper Van was first registered in U K 5.8.1971 RH Drive. London. 020 3289 2407 (HR)

### T2 CAMPERVAN

**1972, 83,000 miles, £17,500.** New engine 2009, clutch, seals, wheels, tyres, axle, alternator, chrome parts. Bromsgrove Autotrim and Vanworks Eskola interior. Full width bed. 3 Way Fridge, sink, cooker, camping electrics and mains hookup. Rust proofing, respray and replacement panels by previous owner. Bath. 07818 031737 (HR)

### T2 LOWLIGHT

**1972, £19,995.** Fully restored low light, crossover, only model manufactured in 1972.Fully restored with original breather pipe rare as hens teeth. Portsmouth. 07342 675897 (HR)

### T2 SPLIT SCREEN

**1966, 65,000 miles, £21,995.** 1.5 air-cooled engine, two berth, four seats, ideal restoration project. Vehicle will have fresh service and MoT once sold. 01454 310000 (HR)

### TYPE 2A

**1967, £15,000 ono.** Multi award winning left hand panel van from Las Vegas. Tax exempt. MoT March 2017. New leather Rock'n'Roll bed and seats. New stainless steel exhaust. Original patina. Good solid van. Dorset. 01202 989022 (PB)

### VW T2 BAY

**52,000 miles, £26,995.** 1.4 fuel injected water-cooled engine, five seats, two berth, Danbury conversion, fixed roof - raising roof and roof bed to make 4 berth can be added for £3,598. 01454 310000 (HR)

### WESTFALIA

**1973, 42,275 miles, £10,995 ono.** Tax exempt, RHD, pop-top, 1.6l van with original fittings & towbar. Full width R&R bed, roof bunk & cab hammock. Large awning. Solid bodywork, needs a little TLC. MoT July. Ready to go. Leicestershire. 07889 258518 (HR)

# Wolfsburg

## Volkswagens may have been built elsewhere in the world, but one city in Germany remains their spiritual home

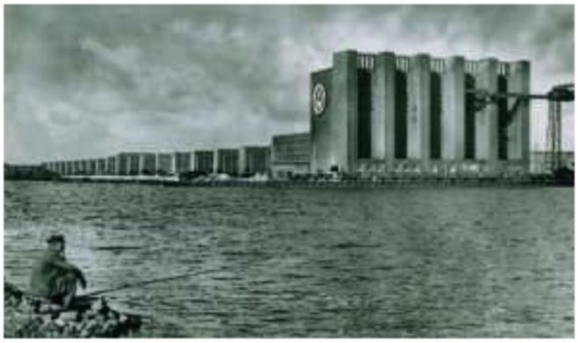
**Words**
Richard Gunn

Wolfsburg. Mention the name to any non-Volkswagen enthusiast and they'll probably look blankly at you. But say it to anyone who appreciates certain air-cooled German classics and eyes will start to gleam and pulses race. For Wolfsburg is the city that gave birth to the Beetle, and is still as closely linked with it as Detroit is with American muscle cars, and Coventry once was with the British motor industry.

Wolfsburg is Volkswagen Central. It may only be the 61st biggest city in Germany (with around 122,000 inhabitants) and they may, on average, earn more than anybody in the country (almost £70,000 per capita) but, without the car plant that is its heart, it would be nothing. Because, prior to 1938, it wasn't actually anything, there was nothing there.

Well, there was the nearby castle of Wolfsburg, which had been around since at least 1302 and gave its name to the city. It means, rather unimaginatively, Wolf Castle, and got its title from the coat of arms of the Von Bartensleben family who built it. The crest featured a wolf leaping from two sheaves of corn. Centuries later, that same wolf would end up on the Volkswagen shield decorating the noses of Beetles. The castle was used to guard over local trade routes. Just imagine the amount of protection they'd take today with VW on the scene!

> “Without the car plant that is its heart, it would be nothing”



The Volkswagen factory and its own power station in 1963. Mosquitos not pictured

The few settlements in the area before 1938 were little more than scattered small villages, with a total population of under a thousand. This was thanks in part to much of the region being mosquito-infested swamp. However, that wasn't apparent to Dr. Bodo Lafferentz of the German Travel, Excursions and Holiday Bureau when he flew over the place in September 1937 looking for a suitable location for a factory, and associated town, to manufacture the forthcoming people's car. He needed a site of 20 square miles that was close to raw materials and transport links. The village of Fallersleben was chosen as the ideal spot, even with the bitey bugs. Despite resistance from Count Werner von der Schulen at Wolfsburg Castle, who stood to lose two thirds of his land, and an insect expert who vainly hoped his argument that “a unique opportunity to study about 70 of the most interesting gnat species would be lost” might sway Adolf Hitler, the foundation stone for the factory was laid on May 26, 1938. Planned alongside it was a town to house 90,000 workers. The Nazi fetish for long-winded slogans saw it christened ‘*Stadt des Kraft durch Freude Wagens bei Fallersleben*’. In English, ‘The City of the Strength through Joy Cars at Fallersleben’. Catchy, huh?

By December 1941, only 2,358 flats had been built, after which all civilian construction stopped because of the war. Wooden barracks subsequently made up the rest of the accommodation. The factory was far more complete, until extensive Allied bombing from April 1944 onwards destroyed close to 60 per cent of it. The flooded ruins were regarded as largely worthless after the war ended. It was only through the optimistic foresight of the British Royal Electrical and Mechanical Engineers under Major Ivan Hirst that production re-started, and the plant and town began to be rebuilt. On May 25, 1945, British forces re-named it Wolfsburg.

From those faltering steps, the town grew, relying totally on Volkswagen for its prosperity. The population was around 6,000 in 1945, 25,422 by 1950, then 62,577 a decade later. Its peak was 135,000 in 1973, the year before production of the Beetle stopped there. During the 1950s and 1960s, much of this upsurge was fuelled by immigrant workers employed by Volkswagen, many of them from Italy.

Volkswagen still dominates Wolfsburg today. The world's biggest car plant is there, along with Autostadt, the huge VW-themed tourist attraction that lures two million visitors every year to a location where, less than 80 years before, there was nothing to see or do, except be nibbled by mosquitos. ■

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